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The Journal

OF THE SOUTH CAROLINA MEDICAL ASSOCIATION

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ANTERIOR CERVICAL FUSION
TREATMENT OF TYPE 2 DIABETES
HEPATOTOXICITY OF ANTITUBERCULOSIS
REPORT OF THE AMA INTERIM MEETING

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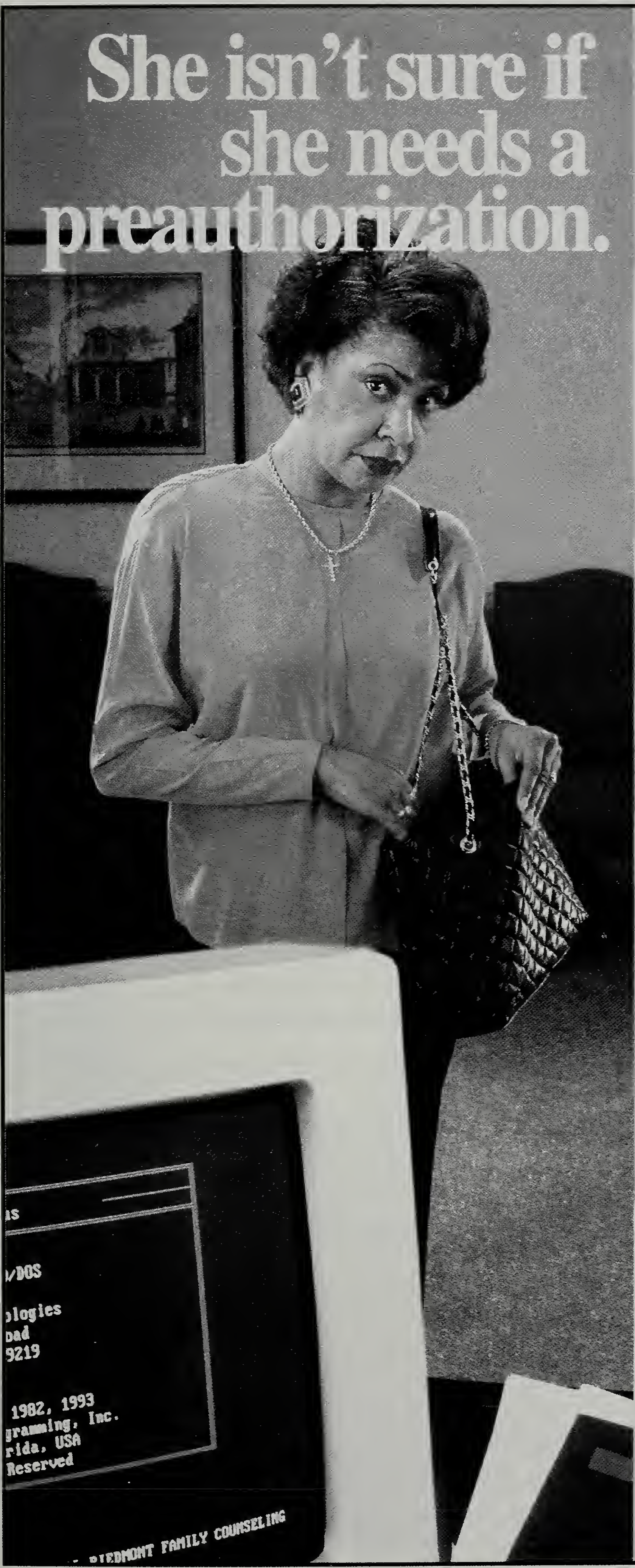

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President's Page

SET-UP

Physicians across the country are at an undeserved risk because of the recent emphasis on fraud and abuse. This predicament stems from the recently enacted Kennedy-Kassebaum legislation and the Balance Budget Act of 1997, both of which address fraud and abuse problems.

I believe the vast majority of physicians in this country are honest, hard working, and caring physicians who have kept the covenant with their patients. However, there are a few physicians who take advantage of the imperfect coding system and profit from their actions. Because of this, we are all subjected to the hassle and paperwork demanded by the Health Care Financing Administration (HCFA) when we process the onerous Evaluation and Management (E&M) documentation guidelines.

It was the intent of HCFA to require physicians to use the new October 1997 E&M guidelines beginning January 1, 1998, despite the fact that practitioners have never seen the guidelines. The American Medical Association (AMA) convinced HCFA personnel that more time was needed for education and implementation and the “grace period” was extended until June 1, 1998.

In addition to these E&M guidelines, home health services and durable medical equipment will be scrutinized and investigated by the government. These investigations will be carried out by the Department of Justice and led by Federal Bureau of Investigation (FBI) agents who have been stationed in South Carolina. The FBI agents are here to investigate fraud and abuse in hospitals and physicians’ offices. It is my understanding that the agents main focus will be on E&M codes, home health services, and durable medical equipment.

The entire scenario is akin to a set-up, ambush or what is legally called entrapment. If providers have not been told what the rules are, how can we possibly modify our coding to conform?

The SCMA is sponsoring numerous workshops around the state on CPT coding and E&M guidelines.We will also be responding to growing concerns about provisions of home health services and durable medical equipment and the need for greater physician oversight of these services. Physicians need to be informed about their responsibilities in certifying and prescribing these services.

I urge all of you to become educated on these matters and stay alert. If you do not, you may be ambushed.

S Nelson Weston MD

S. Nelson Weston, M. D.
President

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THE INTERIM MEETING OF THE AMA
DALLAS, TEXAS
DECEMBER 7-10, 1997

REPORT OF THE SCMA DELEGATION

WALTER J. ROBERTS, JR., M. D.*

The Interim Meeting of the American Medical Association (AMA) was held in Dallas, Texas, December 7-10, 1997. The South Carolina delegation to that meeting included, in addition to our elected delegates and alternate delegates, speciality society delegates which included Dr. Jim Scully from the American Psychiatric Association, Dr. Ed Kimbrough from the American Orthopedic Association, Dr. Marion Burton from the American Academy of Pediatrics, Dr. David Osguthorpe from the American Association of Otolaryngic Allergists, and Dr. Byron Hepburn from the Association of Military Surgeons of the United States. In addition, we were pleased to find that Dr. Greg Slachta, who is now practicing urology in the Beaufort-Hilton Head area, is the delegate from the American Urologic Association. He has added his prestige and knowledge to our South Carolina delegation. With all of these physicians having interest in the goals of the physicians of our state, we truly have a formidable delegation. As always, we had superb support from Bill Mahon, Chief Executive Officer, and Steve Williams, Senior Vice President and General Counsel of the South Carolina Medical Association (SCMA).

Upon arrival in Dallas, the Speaker of the House of Delegates, Dr. Richard Corlin, asked me to chair Reference Committee H. Having this last minute task at hand rendered me quite handicapped as chairman of our delegation since it is a most time consuming position. I wish to thank Dr. Dan Brake, vice-chairman of the South Carolina delegation, for assuming many of my responsibilities. In addition, this was my first meeting as vice-chairman of the Southeastern Delegation, and Danny also acted for me in several of the Southeastern's activities.

The Dallas meeting was unique in one regard. The concern which was in every delegate's mind and on every delegate's lips was the Sunbeam affair.

Over the years, there has been a continuing effort on the part of the Board of Trustees and other leaders of AMA to create non-dues income for AMA. This has been one of the responsibilities of the AMA staff, and over the years the staff has done this in a generally admirable fashion. In addition to raising funds through such things as journal advertising, insurance and investment programs, sponsorship of seminars, and many, many projects, there have been joint agreements with corporations. In the past, such agreements always consisted of AMA supplying information such as pamphlets which promote health, safety or welfare of the American public. At no time has this constituted an **endorsement** of a product or a plan being marketed to the public. Though, in truth, one might argue that such promotions give tacit endorsement.

Earlier this year, a contract was apparently signed by staff members which did constitute an endorsement of Sunbeam health products such as heating pads, blood pressure monitoring equipment, and the like. We were told this contract was not reviewed properly by senior staff nor the Board of Trustees. What many had felt to be a fail-safe mechanism of checks and balances did indeed fail.

This contract with Sunbeam Corporation became public knowledge in September, and the response across the nation was perhaps more profound condemnation than could be imagined. The leadership of AMA quickly backed off from the contract and once more espoused the time-honored posture of AMA that products—no matter their worth or quality—would not be "endorsed" by AMA. There was quick reaction by the head of Sunbeam, and it appeared a settlement or a lawsuit would ensue.

Three of the AMA staff members, including the chief operating officer, were fired. Not long afterwards, the executive vice president of AMA, Dr. John Seward, resigned.

This has been one of the more tumultuous events which has occurred in the long and distinguished history of AMA. An interim executive vice president, Lynn Jensen, has been hired and a national search is underway for a new executive vice president. I have personally endured much soul searching in an effort to extricate myself from the recrimination I have felt for the persons and facts involved. I have concluded, as I hope you all shall, that this was a uniquely unfortunate event occurring in the life of an honorable organization. We now need to put the entire event behind us and go on in the great task of looking out for our patients and their needs. After 150 years of valuable service to patients, to the physicians of this country, and to the remarkable health accomplishments enjoyed by all of our citizens, a great and lasting institution such as the AMA will survive and hopefully become stronger.

---

*207 Spring Valley Road, Columbia, SC 29223.

One might imagine, after this long explanation, that little else went on in the Dallas meeting, but this is not so. Following are some of the other pertinent actions taken by the House of Delegates:

❖ A report from the Council on Ethical and Judicial Affairs (CEJA), in nine recommendations, established standards for institutional ethical services. These include recommendations which encourage all health care institutions to provide ethical counselling, that the financial costs be bourne by the institution, and that standards for such consultations be established regarding the patient, family, and appropriately trained consultants. This report provided guidelines for development and improvement of ethical consultation programs.

❖ There were reports of physicians selling, in their offices, non-prescription and non-health-related goods such as household products and magazines. CEJA's opinion is that this practice, except in rare circumstances where the physician does not benefit financially, is not ethical.

❖ A substitute resolution sought federal legislation to obtain relief from any penalties which a physician might incur in providing professional courtesy. The governmental threats regarding "fraud and abuse" as promulgated since the Kennedy-Kassebaum legislation was passed, makes it incumbent on every physician to not ignore such possibilities.

❖ In an "in-progress" work report, the Council of Medical Services presented to the House of Delegates reaffirmation of AMA's efforts in support of pluralism of health care systems and financing mechanisms to obtain universal health coverage and access to health care services and outlines some of the questions and options in an effort to implement individually owned health insurance.

❖ Mixed testimony was heard in reference committee on a resolution regarding the actions of some medical directors of Medicare carriers. Apparently, in some states, "model coverage policies" have been developed without input from the local physician and specialty society community. A substitute resolution asked AMA to work with the Health Care Financing Administration (HCFA) in allowing "significant involvement" by AMA, medical specialty societies, and other appropriate parties to be involved in determination of coverage policies.

❖ Among the most important of issues at this AMA meeting was a timely report from the Board of Trustees (BOT) regarding the major thrust of the government in investigating and prosecuting cases of fraud and abuse. BOT Report 25 discussed this in length. It is clear that the Department of Justice, Health and Human Services (HHS) Inspector General, postal service, Internal Revenue Service (IRS), and other agencies of the government are gearing up for this activity by adding more personnel and committing more time and money toward this pursuit. Physicians and all other health care providers must be alert and singularly careful in ordering, record-keeping, billing, and, indeed, in every aspect of running their practices and businesses. Hospitals are already developing compliance plans which will avoid such confrontation. In this report, the AMA strongly advises physicians to do likewise. The fact that "ignorance is no excuse" and that even the most inadvertent and unintentional error may be interpreted as fraudulent is a frightening but realistic threat.

❖ Once more, the AMA adopted a resolution to repeal the Clinical Laboratory Improvement Act (CLIA) for physicians' office laboratories. Two bills, H.R. 2250 and a companion bill, S. 1068, are before Congress and will be actively and immediately supported by AMA efforts in Washington.

❖ At the last SCMA Annual Meeting in Charleston, the Greenville Medical Society presented a resolution asking that insurers and other agencies use a single identifying number in business activities. Often, Social Security numbers, Drug Enforcement Agency (DEA) numbers, or state licensure numbers have been used on claims forms and other documents. We, as a delegation, carried this resolution to the AMA meeting and the House of Delegates agreed with it. In a substitute resolution, the thrust is to have the DEA number used only in prescriptions of controlled substances, and that for all identification purposes, the "Medical Education number" be used. The AMA has lobbied vigorously to get this number used as the "unique" identifying number for physicians in the country. We view this as success in achieving the purpose of the Greenville County Medical Society's resolution.

❖ A substitute resolution was passed which asked AMA to investigate whether testifying in a medico-legal case constitutes the practice of medicine when done by a "medical expert witness." It further asked that county and specialty societies consider establishing mechanisms by which peer review of such testimony can be performed and if warranted, disciplinary action be undertaken by report of the event to the appropriate licensing authority. This is, of course, aimed at the so-called "hired guns" often brought in by plaintiff attorneys in medical liability cases.

❖ In California, there have been standards established by the California Business and Professional Code which require, for state licensure, course work which exceeds minimum Liaison Committee for Medical Education (LCME) requirements. This, therefore, constitutes interference on the part of the state Legislature in establishing medical school curriculum. A resolution was passed urging such legislative activities to cease and to allow decisions about such matters to be made by the appropriate accreditation bodies and medical school faculties.

❖ Medicare has been refusing to pay for the services of teaching physicians who are supervising resident physicians unless the teaching physician is physically present and is himself recording appropriate examinations and notes. A resolution was passed asking AMA to support the concept that private payors should not be utilizing such standards unless they are contributing to graduate medical education on a scale proportionate with Medicare's contribution.

❖ A resolution was referred to the Board of Trustees asking for a study to determine the appropriate ratio of physician to physician extenders (i.e., nurse practitioners, PA's, etc.) which will allow for effective directing and supervising of the treatment and care of patients.

❖ Accepted was a Council on Scientific Affairs report on Alzheimer's Disease which reviewed and synthesized information regarding recent findings. The report suggested policy based on identifying gaps on patient and caregiver education, financing of care, and research needs.

❖ Another Council on Scientific Affairs report recommended that AMA support policy calling for return and reuse of medications to the dispensing pharmacy in an effort to reduce waste of unused medications in long-term care facilities.

❖ In an effort to address and correct as much as possible and prevent reoccurrence of such unhappy contractual arrangements as have occurred with the Sunbeam contract, the Board of Trustees submitted Report 11 (1-97). In this report, there was discussion of the Sunbeam contract and the corrective actions undertaken. The report also outlined the formation and actions of the Board/Staff Liaison Committee, litigation, public perception and physician opinions, conduct of current AMA corporate relationships, and a moratorium on new business relationships. Guidelines will be developed which will direct further corporate relationships. The report states that it is unrealistic for an organization which derives two-thirds of its funds from non-dues revenue not to deal with the world of business and finance but recognizes clearly that in such dealings, there must be a set of principles providing a moral compass, and that any such activity must be consistent with the vision, the goals, and the ethical structure of AMA.

❖ For the third meeting of AMA, consideration has been given to the establishment of a national network comprised of physician-owned or physician-operated managed care organizations, such as our Physicians Care Network. On each occasion, the Council of Medical Services has looked at the submitted resolution as an effort to get AMA to try to establish a nationwide managed care group. In the opinion of most, this is not a good idea. Through South Carolina's efforts, we have encouraged the council to once more look at the potential of an AMA plan to bring together—perhaps as a "brokering agent"—the existing physician provider networks. I will be going to Chicago later this month to meet with the council to explain our needs and objectives in structuring such a network, namely the ability to market our managed care organization across state lines and in a nationwide arena.

❖ A resolution was passed which asked AMA to oppose physician "termination without cause" provisions in physician managed care contracts which do not contain appropriate due process and appeal processes. In this committee's deliberations, there were several items of great importance which were quite controversial. The issues were as follows:

❖ In light of the recent specter raised by the HHS Inspector General, the Department of Justice and others regarding "fraud and abuse," an important report from the Council of Medical Services addressed the physician's responsibilities in ordering and supervising home health services. A total of nine recommendations addressed such things as the physician seeing the patient on a periodic basis, that the forms to be filled out for orders and follow-up be simplified, that communications between the physician and the home health agencies be improved, and that the AMA vigorously inform physicians about potential civil and criminal liability issues which may be encountered when certifying home health care services.

❖ The Board of Trustees submitted a report regarding the activities of its accreditation program. This program, American Medical Accreditation Program (AMAP), has met with mixed success. The principle concern is poor communication between the AMAP representatives and the local or state medical society in which credentialing organizations are being formed. There appears to be a genuine need for the type services the AMA is seeking to establish. However, many communities already have credentialing bodies established and functioning. AMAP is going to make sure the efforts work in a mutually satisfactory manner.

❖ Perhaps the most contentious issue of the entire meeting, aside from the Sunbeam contract controversy, was the issue over HCFA documentation guidelines. Once more, referring to the current thrust of the Office of Inspector General and others in confronting "fraud and abuse" in the Medicare system, these new guidelines are viewed by most physicians as cumbersome, overly lengthy and complex, and generally not acceptable. There were resolutions which ranged from asking for relief from these new and convoluted guidelines to out-and-out refusal to accept or abide by them. Ultimately, in our reference committee, we devised a substitute resolution which consisted of nine resolves. They were:

> *Resolved*, that the burden of documentation for E&M services be reduced.
>
> *Resolved*, that the AMA work to ensure that appropriate safeguards exist, so that inadvertent errors do not constitute fraud or abuse.
>
> *Resolved*, that AMA urge HCFA to fund distribution by the Medicare carrier of any documentation guidelines.

As incredible as it may seem, much of the change in guidelines, which may influence the potential of the physician for fraud and abuse accusation, have not been made available to physicians through their Medicare intermediary.

> *Resolved*, that the time and expense involved in complying with these new and more demanding documentation guidelines be reflected in the Resource Based Relative Value Scale (RBRVS) payment plans.

The five other "resolves" addressed review of content of the guidelines, educating physicians about the guidelines and any revisions, urging a test period for implementation as to the impact on patient care, cost effectiveness and efficiency of delivery of health care services which may be seen, and opposition to the inclusion of the CPT codebook.

This resolution, though complicated, crafted from seven resolutions presented to the House of Delegates, seemed to be the best answer to the various concerns expressed.

In summary, the AMA Interim Meeting of 1997 proved to be one in which much was accomplished, despite the overriding presence of the Sunbeam contract and its accompanying changes in the AMA staff. In my opinion, the AMA will come out of those unhappy confrontations and changes as a stronger and more useful advocate for the physicians of the country—and more importantly—for advocacy of our patients.

As I have said in previous reports to you, your AMA delegation is committed to its task of representing South Carolina physicians at national level. We will be responsive to your questions, comments, and interests. Do not hesitate to call me or any of the delegates with your concerns. ❒

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SUCCESSFUL FUSION USING ALLOGENEIC BONE GRAFT IN ANTERIOR CERVICAL DISCECTOMY AND FUSION*

MICHAEL N. BUCCI, M. D., F. A. C. S.**
DORIS PHILYAW, B. S. R. N.

The anterior approach for the surgical treatment of herniated cervical discs causing compressive radiculopathy has proven to be safe and effective.[1-3] Over time the type of construct has changed and more recently authors have been reporting on the successful use of freeze-dried allograft.[4,5]

In a previous publication, we reported the success of anterior cervical discectomy and fusion using autograft bone.[2] A high fusion rate was achieved in 148 consecutive patients. However, we discovered an unacceptable level of postoperative donor site discomfort and complications. Questionnaires delivered to all patients in the study at six months or longer postoperatively revealed 25 percent of the patients reported persistent discomfort at the hip donor site. This was similar to a previous report by DePalma, et al.[6]

Recent studies of successful cervical fusion using allograft bone together with the safety profile reported by the American Red Cross on properly tested bone prompted a change in our practice. As a result, in 1992 we changed our protocol to incorporate allograft bone. The following represents our findings.

MATERIALS AND METHODS

During the period January 1992 and July 1996, we performed 292 consecutive anterior cervical fusions using cadaveric freeze-dried allograft bone obtained commercially from one of three tissue banks in the United States. Cervical immobilization was used for the first four to six weeks postoperatively and cervical spine radiographs were obtained one to three months postoperatively with flexion and extension views at three months. No instrumentation was used initially and 105 of the procedures involved more than one level. No patients were lost to follow up.

The radiographs were reviewed by Anderson Radiological Associates without any knowledge of the type of graft material used. Patients demonstrating any instability on flexion and extension views were subsequently followed for six months until such time as fusion had occurred.

---

*From the Department of Neurosciences, Anderson Area Medical Center, Anderson, SC.

**Address correspondence to Dr. Bucci at 109 Montgomery Drive, Anderson, SC 29621.

TABLE 1

STUDY COMPARISON ON THE USE OF AUTOGRAFT VERSUS ALLOGRAFT FUSION

	1993	1997
NUMBER OF PATIENTS	148	292
YEARS OF STUDY	3	4
BONE GRAFT TYPE	Autograft	Allograft
INCISIONS	2	1
WOUND COMPLICATIONS	6	0
NON-UNIONS	6	3

A standard Cloward type fusion was performed using a 12 mm drill hole. A 14 mm graft which was trimmed and fashioned was used and counter sunk using traction to allow for increased spinal height and distraction.

RESULTS

Three patients developed a nonunion. Two of these required reoperation with vertebrectomy, strut graft fusion and anterior instrumentation. The other patient was followed conservatively. There were no other major complications.

DISCUSSION

Interbody cervical fusion has been a highly successful operation since the 1950's due in large part to the pioneering efforts of Cloward, Smith and Robinson. Fusion rates are high with some variation in certain studies between autograft and allograft bone.[7-10]

In 1991, Zdeblick and Ducker report 87 cases of cervical fusion using either autograft or allograft bone and found similar rates of fusion for one level procedures.[5] However, they did discover different rates for two level fusions. For a one level fusion using autograft bone they had a five percent nonunion rate for both allograft and autograft. For two-level fusions, the autograft nonfusion rate was 17 percent and allograft was 63 percent, which was higher than other reported studies.[7, 9] A Smith-Robinson technique was employed. More recently, Bishop, et al reported in the *Journal of Neurosurgery* in 1996 on nonunion rates using autograft and allograft bone and similarly found increased nonunion for multiple levels using allograft bone.[7] They cited a nonunion rate of 27 percent in one-level fusions and 47 percent for multiple level fusions. Similarly they used a Smith-Robinson technique.

We used a Cloward fusion with good success. Specifically, we inserted a slightly larger graft and used distraction to allow for a nice tight fit.[3] This added height and distraction subsequently allowed for cervical nerve root decompression in addition to lateral foraminotomy using microscopic technique intraoperatively.

Our study suffers from the inherent flaws of a nonrandomized trial with prospective planning and retrospective analysis. Nevertheless, we were able to achieve high fusion rates and avoid the donor site complications which we previously reported. Clinically, we noted a more rapid and less painful postoperative recovery as well.

CONCLUSIONS

We conclude that 1) allogeneic bone graft is safe and effective for patients with compressive cervical radiculopathy, 2) nonunion rates are low and compare favorably with autograft bone, 3) allogeneic bone graft eliminates the potential donor site complications that have been described, and 4) the procedure is well tolerated and decreases the requirement for anterior spinal instrumentation. ❒

ACKNOWLEDGEMENTS

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TREATMENT OF TYPE 2 DIABETES: A REVIEW OF METFORMIN IN CLINICAL PRACTICE*

ROBERT D. HADLEY, PH. D., PA-C**
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DAVID G. ASKINS, JR., M. D.

The American Diabetes Association established a new definition of diabetes in July of 1997,[1] leading to many more patients being classified as diabetic. Currently, a fasting plasma glucose $\geq$ 126 mg/dl or a random plasma glucose $\geq$ 200 (the latter in addition to the presence of diabetic symptoms of polyuria, polydipsia or weight loss), on two occasions, is sufficient for a diagnosis of diabetes. Other authors[2] have shown that a single measurement of hemoglobin A1c (HgBA1c) greater than 7.0 percent has a 99.6 percent sensitivity and a 99.9 percent specificity in identifying patients with diabetes.

The traditional mainstays of treatment of Type 2 diabetes have been stepwise institution of diet and exercise, addition of oral agents (previously only sulfonylureas in this country), and addition of self-administered insulin. With the introduction of metformin in 1995, treatment options were expanded in the management of Type 2 diabetes.[3] Metformin, a biguanide, has a mechanism of action distinct from that of sulfonylureas. The glucose lowering effects of metformin are primarily attributed to inhibition of hepatic glucose production and increased peripheral uptake of glucose.[4] Metformin does not stimulate pancreatic release of insulin as do the sulfonylureas, does not increase circulating insulin levels, and is therefore associated with reduced risk of hypoglycemia.[5] The two agents provide a similar degree of glycemic control when used independently as monotherapy. Additive control is achieved when these agents are used in combination with each other, with insulin, or as a combination of sulfonylureas, metformin and insulin.[6] New drugs in addition to metformin have expanded the armamentarium beyond sulfonylureas and insulin. Disaccharidase inhibitors (acarbose) and peripheral insulin sensitizers (troglitazone) also have additive effects when used in combination therapy.

Other potential benefits of metformin include weight loss or reduced weight gain, decreased insulin resistance, and reduced serum triglycerides. These effects may contribute to reduced cardiovascular risk.[6]

Previous studies of metformin efficacy in this country were performed with controlled clinical populations. However, typical clinic populations do not necessarily mirror those of clinical trials. The purpose of our study was to examine the response of Type 2 diabetic patients treated with metformin in our ambulatory care clinic. The primary objective was to assess glycemic control as measured by glycosylated hemoglobin. We also compared initial glycosylated hemoglobin levels with subsequent patient response to metformin.

METHODS

Charts of 107 patients from the General Adult, Internal Medicine and the Family Practice Clinics who had been prescribed metformin were selected for consideration for inclusion in this retrospective study. All these patients were already being treated with oral agent(s) and/or insulin at the time they began metformin treatment. Patient data including

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Hemoglobin A1c (HgBA1c), serum glucose, HDL, LDL, triglycerides, liver enzymes, BUN, creatinine, age and weight were recorded from the charts. The date each patient was started on metformin was noted, and was designated as time zero, and other dates were expressed relative to the start date.

Patient population was 37.4 percent white and 62.6 percent black, ranging in age from 26 to 80 years. Most of the patients had one or more concurrent medical conditions, including obesity, hypertension, hyperlipidemia and depression. Metformin was used at a dose of 500 to 2000 mg/day, either as monotherapy or in combination with sulfonylureas or sulfonylurea/insulin. The clinics were staffed on a rotating basis by multiple providers including physicians, physician assistants and nurse practitioners.

In measuring changes in HgBA1c levels, baselines were taken as the most recent measurements within two months of metformin initiation. Two patients also were included whose HgBA1c values were measured more than two, but less than three months prior to drug initiation. Endpoints were taken as the most recent HgBA1c values within three to six months post drug initiation. Using these criteria, we obtained baseline and endpoint values for 30 patients within our original group. This group was then arbitrarily divided into two subgroups based on initial HgBA1c levels, with 15 patients above 9.5 percent ("high group") and 15 patients with 9.5 percent or less ("low group"). Baseline and endpoint values were compared using a paired t-test.

Serum glucose values were not analyzed for this study because the charts often did not indicate whether the values were fasting or not.

RESULTS

Individual patients differed in their responses to metformin treatment. Inspection of all the HgBA1c levels for the 30 patients meeting our criteria (Figure 1) reveals that individual patients' levels fluctated somewhat over the period measured. Some patients' levels declined sharply, while others' changed little, or even increased. Data for all patients are presented so that the reader may easily discern individual responses to treatment.

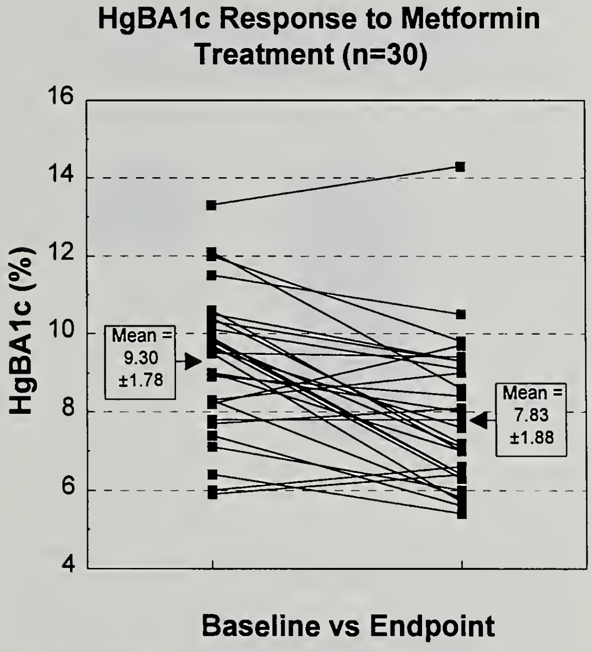

Figure 1. Hemoglobin A1c (HgBA1c) levels for 30 Type 2 diabetic patients before (*Baseline*), and three to six months after (*Endpoint*), initiation of metformin treatment. The mean *Baseline* and *Endpoint* HgBA1c levels (±S.D.) are indicated on the graph. Each patient is represented as a line on the graph.

As in earlier studies of metformin efficacy,[6] treatment lowered HgBA1c significantly. Comparison of mean baseline and endpoints for the 30 patients (Figure 1) showed a decrease in mean HgBA1c of 1.47 percentage points. The significant ($p<.001$) decrease from a mean of 9.30 percent (±1.78 S.D.) to 7.83 percent (±1.88 S.D.) is comparable to the difference between metformin and placebo-treated patients in U.S. clinical trials.[6]

When patients were divided into "High" and "Low" initial HgBA1c groups, relative to 9.5 percent, a significant ($p<.01$) difference in response was noted. The mean reduction in HgBA1c was 2.26 percentage points in the group with the higher initial levels versus 0.67 percentage points for the lower group (Figure 2). It should be noted that six of the 15 patients in the Low group were on metformin

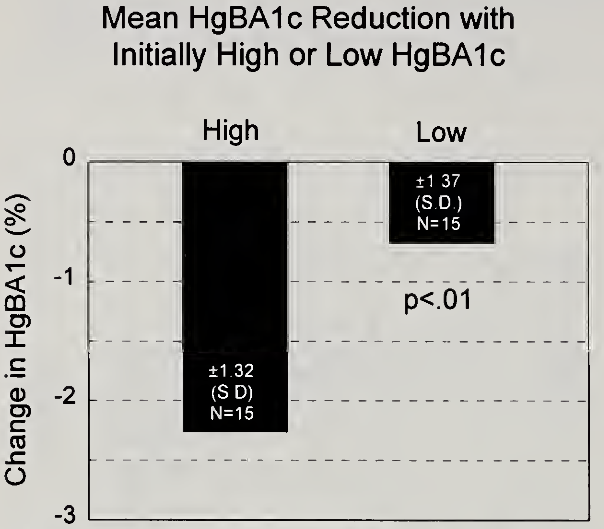

Figure 2. Patients' HgBA1c levels were divided into initially "high" and initially "low," with those over 9.5 percent being placed in the *High* group, and those of 9.5 percent and below being placed in the *Low* group. This arbitrary division split the 30 patients into two equal sized groups of 15 each. The *High* group experienced a decrease in HgBA1c of 2.26 percentage points, whereas the *Low* group experienced a decrease of 0.67 percentage points.

monotherapy, whereas all 15 patients in the High group were on combination therapy.

The absolute change was about the same (~1.5 percentage points) among all groups (metformin alone, metformin/sulfonylurea, metformin/insulin). Patients on insulin initially had higher HgBA1c levels than did the non-insulin patients, but their response to metformin initiation was very similar—a decrease of 1.30 HgBA1c percentage points.

Weights and lipid levels were recorded, but were inconclusive. Weights varied only slightly, and in no consistent way. Patients who were hyperlipidemic were treated concurrently, and no conclusions could be reached regarding the effects of metformin on hyperlipidemias.

DISCUSSION/CONCLUSIONS

This was a retrospective study, based on chart reviews of patients seen in the clinics for their regular visits. All data came from existing chart notes; the information for this study was not initially recorded using standardized methods. This study therefore reflects real-life clinical practice.

Different patients responded differently to metformin therapy. Some patients had a dramatic response, while others had little change; five patients had increased HgBA1c values at the end of the study. Dividing the population into High and Low initial HgBA1c values revealed a tendency for those with higher initial levels to have a greater response to therapy. However, this response cannot be solely attributed to metformin, as all patients in the High group, but only nine patients in the Low group, were on combination therapy with other agents. Our interpretation was hampered by comparing metformin monotherapy to multi-agent therapy; further study on the use of metformin in a multi-agent treatment regimen should be considered.

Compliance issues were difficult to determine in this population. As this was a retrospective study, no measures could be instituted to assess compliance. In this particular patient population, including inner city and indigent patients, it is generally considered that noncompliance, particularly in the areas of exercise and diet, is a common problem.

Our initial patient population of 107 patients was reduced to 30 for various reasons: too-recent initiation of metformin therapy, not enough data in the patient chart (HgBA1c level), inappropriate data for study protocol (data too old, values not taken frequently enough). Patients were not discounted due to concurrent medical conditions, only due to incomplete or inappropriate data as compared to the study protocol.

Because weights did not change significantly in the patients, it is unlikely that metformin therapy would have a dramatic effect on patient obesity. However, as reported previously in clinical trials, it may prevent weight gain that is associated with sulfonylurea or insulin therapy.[6]

Although metformin has been shown to decrease triglycerides in patients,[6] we were unable to determine its triglyceride limiting efficacy in our population. Few patients had triglyceride values regularly taken, and those that were being followed specifically for hypertriglyceridemia were being treated with a drug specifically for that condition (a bile acid sequestering agent, gemfibrozil or an HMG-CoA reductase inhibitor). Our patient subpopulation of Type 2 diabetics with concommitant hypertriglyceridemia was too small to obtain any relevant data.

The purpose of this study was to examine a population of patients in a typical clinic setting, without the tight controls that are imposed in a clinical trial. Our patients' responses (1.47 percentage points decrease in HgBA1c over three to six months) were overall quite similar to those published for the U. S. clinical trials of metformin (1.5 percentage points decrease in HgBA1c for metformin-treated vs. placebo over 29 wk). Additionally, patients with initially higher HgBA1c levels responded significantly better than those with lower levels, although their HgBA1c levels never reached the normal range. After the institution of optimum diet and exercise, metformin is an appropriate first oral agent in treating Type 2 diabetes. ❐

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CORRELATES OF HEPATOTOXICITY AND ANTITUBERCULOSIS THERAPY IN SOUTH CAROLINA*

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HAROLD DOWDA, PH. D.
CAROL J. POZSIK, M. P. H.

From 1985 through 1992, the number of tuberculosis (TB) cases in the United States increased by 20 percent (from 22,201 cases in 1985, to 26,673 cases in 1992). These increases were concentrated in racial/ethnic minorities, persons under 16 or 25 to 44 years of age, males, and the foreign-born.[1] Several factors are responsible for the increase in TB cases. These include the HIV/AIDS epidemic, substance abuse, immigration of persons from countries where TB incidence rates are 10-30 times higher than in the United States and transmission of TB among persons residing in crowded settings such as hospitals, prisons, and homeless shelters.[2,3]

Since 1992, the number of TB cases declined. However, the numbers still exceeded the cases reported in 1985.[3] The decline is due to the increase of federal resources to assist state and local TB control programs, direct observed therapy (DOT), emphasized tuberculin screening and preventive therapy administration, and programs to prevent TB spread among HIV-infected persons.[3] South Carolina is in the upper third of the 50 states in reported TB cases.

Tuberculosis treatment recommended by the American Thoracic Society and Centers for Disease Control and Prevention (CDC) for TB patients is an initial four drug regimen.[4] These drugs include isoniazid (INH), rifampin (RMP), pyrazinamide (PZA), and ethambutol (EMB) or streptomycin. The four drugs are administered for four months followed by two months of RMP and INH. Drug resistance to INH and RMP lengthens the course of treatment from six months to 18 to 24 months.[5] For patients with both TB and HIV infection, treatment with INH and RMP is continued for seven months. Three drugs INH, RMP, and PZA have been found to be hepatotoxic.[4,6] Hepatotoxicity is one of the major reasons treatment schedules cannot be completed or must be modified. Hepatotoxicity is monitored by liver function tests, and values two times normal are considered significant. Occasionally, hepatotoxicity leads to serious complications including death.

The purpose of the present study was to determine correlates between therapy and hepatotoxicity in TB patients. Data was obtained by the Division of Tuberculosis Control and the Bureau of Laboratories, South Carolina Department of Health and Environmental Control. Liver toxicity was monitored by age group, sex, race, length of therapy and by HIV status.

METHODS

Between January 1, 1995 and September 18, 1996, there were 598 new cases of TB report-

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Table 1
Distribution of ALT and AST values in 314 TB patients in South Carolina, 1995-1996.

IU/L	ALT		AST	
	N	%	N	%
<30	132	42.0	106	33.8
30-39	51	16.2	62	19.7
40-44	31	9.9	27	8.6
50-59	15	4.8	21	6.7
60-69	14	4.5	12	3.8
70-79	15	4.8	12	3.8
80-89	7	2.2	5	1.6
90-189	29	9.2	40	12.7
≥200	20	6.4	29	9.2

ed by the Tuberculosis Control Division of the South Carolina Department of Health and Environmental Control (DHEC). Of the reported cases, 470 had pulmonary and 43 had pleural TB. After eliminating those with insufficient clinical history or laboratory results, only 314 (61.2 percent) subjects were eligible for entry into the study. Patient information was processed so that the confidentiality of the patient identity was assured.

Two liver functions tests were performed by the Clinical Chemistry Section of the Bureau of Laboratories, DHEC to monitor hepatotoxicity. Serum aspartate transaminase (AST, formerly SGOT), and serum alanine transaminase (ALT, formerly SGPT) were determined using the Boehringer Mannheim Diagnostic International Federation of Clinical Chemistry procedure on a Hitachi 911 analyzer.

For each patient, sex, age, race, HIV test results and date of initiation of treatment, and dates and results of ALT and AST tests were recorded. Patients treated for TB were usually started on three or four medications, and dosages changed with drugs deleted or added during the course of the treatment. Drug resistance and side effects other than liver toxicity, such as a rash, can be the cause of a medication change. Laboratory results were reviewed and the peak values and the time since treatment was initiated were recorded.

Normal values of ALT and AST for the procedure used were 0-31 IU/L and 0-31 IU/L for females, and 0-40 IU/L and 0-37 IU/L for males respectively. For analysis, elevated levels were considered to be two times normal and each patient was categorized as having a toxic value or not. Difference in the frequencies of toxic values were determined separately for ALT, AST and also by combining those who had either a toxic ALT, or AST or both (ALT and/or AST) by sex, race, age group (<35, ≥35), by determining relative risk (RR) and 95% confidence intervals (CI). T-tests were used to determine if there were differences in time to toxicity by sex, race and age group (<35, ≥35).

RESULTS

The records of 314 TB patients were examined for evidence of hepatotoxicity. Of the 314 patients, 74.5 percent were males and 77 percent were African Americans or other races (non-whites). The patients ages ranged from 15 to 91 years, with a mean age for females 49.1±19.0 and 50.4±15.4 for males (p=.57). The peak ALT and AST values recorded for the patients were less than 30 IU/L for 42 percent and 34 percent respectively for the patients in this study (Table 1). Over nine percent of the patients had values between 90 and 189 IU/L for ALT and over

Table 2
Correlates of elevated liver enzymes, in 314 TB patients in South Carolina, 1995-1996.

	N	Elevated ALT			Elevated AST			Elevated AST and/or ALT		
		N	%	RR 95% CI	N	%	RR 95% CI	N	%	RR 95% CI
SEX										
Female	80	18	22.5	1.17	18	22.5	0.77	24	30.0	1.0
Male	234	45	19.2	0.72-1.90	68	29.2	0.49, 1.22	70	29.9	0.68-1.48
RACE										
NW*	242	51	21.1	1.26	71	29.3	1.41	77	31.8	1.35
White	72	12	16.7	0.71-2.24	15	20.8	0.86-3.30	17	23.6	0.86-2.12
AGE										
≥35	252	53	21.0	1.30	74	29.4	1.52	80	31.8	1.41
<35	62	10	16.1	0.70-2.41	12	19.4	0.88-2.61	14	22.6	0.86-2.31

* Non-white

12 percent for AST. Less than 10 percent had values over 200 IU/L for both ALT and AST.

There were 63 cases with elevated ALT, and 86 with elevated AST values. Both enzymes were elevated in 55 of these patients, and 94 patients had either an elevated ALT or an elevated AST or both liver enzymes (ALT and/or AST). Table 2 shows the frequency of elevated values by sex, race (white=72, non-whites=five others and 237 African Americans), and age group (≥35 and <35). Although not significant, elevated AST results were more frequently observed in those 35 and older (RR=1.52, 95 percent CI=0.88-2.61) .

Of the 94 TB patients who had elevated liver enzymes, approximately half of the elevations occurred within the first two months of treatment (ALT, 56 percent and AST, 47 percent). Another third occurred between three to six months (ALT, 29 percent and AST, 36 percent) and less than 20 percent occurred after six months (ALT, 16 percent, and AST, 17 percent).

The time to toxicity was found to be significantly different for males and females and between the race groups for the 94 patients who had at least one elevated enzyme level (Table 3). Females had shorter times until elevations than did males (p=.03). White patients had a shorter time until toxicity than did non-white TB patients (p=.01).

A total of 12 patients were identified who were HIV positive, out of a total of 156 TB patients who were HIV tested. One patient had an elevated AST (8.3 percent) as compared to 39 out of 144 (27.1 percent) HIV negative patients (p=.15).

DISCUSSION

In this study of pulmonary and pleural TB, most of the cases were among males (75 percent), and in non-whites (77 percent). Fifty-five percent of the cases occurred in people who were less than 50 years of age, while 14 percent of the cases were in people who were 70 years of age and older. These findings reflect the national data.[1,12]

It was found that 20 percent had only an elevated ALT, 27 percent had only an elevated AST, and 30 percent had one or both of the enzyme values elevated two times normal. Others have found similar proportions with elevated liver enzymes using various

Table 3
Comparisons by sex, race and age group for 94 Patients with elevated enzymes for time in months since initiation of treatment, South Carolina, 1995-1996.

	N	Mean±SD	N	Mean±SD	p-value
SEX		Males		Females	
	70	4.00±3.00	24	2.54± 2.15	0.03
RACE		Non-white		White	
	77	3.88±3.04	17	2.48±1.46	0.01
AGE		<35		≥35	
	14	4.07±3.67	80	3.55±2.73	0.53

criteria for defining elevation. In one study, out of 1,000 patients, 22.2 percent had an abnormal AST value (>30 IU/ ml), while on INH therapy.[7] In another study, while being treated with INH, RMP and PZA (66/70 patients), 29 percent had either an ALT or AST value greater than 80 IU/L.[8] Scharer et al.,[9] found that in patients receiving only INH therapy, 12 percent of 90 patients had elevated AST and ALT of greater than 40 units.

There are several risk factors for abnormal liver function tests for TB patients. These include: 1) increasing age, 2) pre-existing liver damage, 3) being a slow acetylator and 4) alcoholism.[1,4,7] Another risk factor may be HIV infection. Recently, it was found by Ozick et al.[8] that AIDS patients with TB, had a statistically greater chance of developing hepatotoxicity than did patients with only TB ($p<.01$). Our study had a small sample of TB patients who also were HIV positive (12/156). Those who were HIV positive were not found to be at higher risk for hepatotoxicity.

The time to an elevated liver enzyme value was evaluated in this study and it was found that about half of the elevations occurred within the first two months of treatment. In another study, involving 90 patients on INH, 12.2 percent developed elevations of both AST and ALT of greater than 50 units within the first two months of therapy.[9] Mitchell et al.,[10] found that 50 percent of the cases of elevated liver enzymes (defined as 60 mU/ml) occurred within eight weeks of the beginning of treatment, while 36 percent more became elevated after three to six months and 14 percent occurred after six months.

No statistically significant differences between sex and race and liver toxicity were found in this study. Patients older than 35 years, were at greater risk, though not significantly, for elevated AST. Mitchell and Wendon[11] found that there were no differences in frequency of AST elevations between black and white patients during INH therapy. They did find that the frequency of AST abnormalities increased with age of the patient (primarily in persons older than 35 years of age) especially among white patients.

In the 94 patients who had at least one elevated liver enzyme, the time from initiation of treatment for TB to hepatotoxicity was shorter for females than males in this study. The time to hepatotoxicity was also shorter in whites as compared to the non-whites.

Limitations for the present study include the lack of information concerning potentially confounding factors such as alcohol consumption. Limiting the study to pulmonary and pleural TB probably eliminated many cases of HIV infected patients since they tend to have more extrapulmonary TB.[12]

SUMMARY

This study revealed that 20-30 percent of TB patients who were taking antituberculosis therapy developed elevated liver function tests. Half of the elevation in liver enzyme values occurred within the first two months of treatment. No statistically significant differences between sex, race and liver toxicity was found in this study. The time from initiation of treatment for TB to development of hepatotoxicity was shorter for females and whites.

Physicians and public health workers should monitor the liver function tests of TB patients who are taking antituberculosis treatment. Recommendations for monitoring hepatotoxicity vary depending on the age of the patients. For patients less than 35 years old, monthly symptom review for jaundice, acholic stools, fever, anorexia, nausea and vomiting, may be adequate.[13] For older patients, liver function tests are recommended monthly[13] or every one to two months.[14] ❒

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MEDICARE UPDATE

By this time, you should have received the December 1997 and January 1998 editions of the *Medicare Advisory* from Palmetto Government Benefits Administrators, the South Carolina Part B Medicare Carrier. Both issues contain important information about the changes for 1998. Please read your *Medicare Advisories* carefully. *If you have any questions, you may call the Medicare Part B Customer Service Center at (803) 788-5568 or Elizabeth Biggers Bernat at the SCMA at (803) 798-6207 or (800) 327-1021, extension 236.*

New Evaluation and Management Documentation Guidelines Delayed: The Health Care Financing Administration (HCFA) has delayed enforcement of the new 1997 evaluation and management (E/M) documentation guidelines until July 1, 1998. Now through June 30, 1998, Medicare will accept use of either the 1994 or 1997 versions of the E/M documentation guidelines.

Need Help with the HCFA 855 Forms?: Are you having trouble completing the HCFA 855 forms? Nancy Parker, with PBGA, will conduct a one-time workshop to explain how to fill out these complicated forms. The HCFA-855 workshop will be on January 28, 1998, 9:00 a.m. to noon, at the Blue Cross and Blue Shield Auditorium, I-20 at Alpine Road, Columbia, South Carolina. For more information, please refer to your January 1998 *Medicare Advisory.*

Private Contracts Between Medicare Beneficiaries and Physicians: Section 1802 of the Social Security Act, as amended by Section 4507 of the Balanced Budget Act, permits a physician to enter into a private contract with a Medicare beneficiary to provide covered services if specific requirements are met. However, when a physician enters into a private contract with a Medicare beneficiary to provide services that would otherwise be covered, no services provided by that individual are covered by Medicare and no Medicare payment can be made to that physician directly or on a capitated basis. The physician must "opt out" of Medicare for a two-year period.

At this time, HCFA is requiring that a physician who has signed an agreement to participate in Medicare terminate that agreement at the end of a calendar year before he or she may opt out of Medicare during the next calendar year. In order to allow physicians more time to consider this option, and in view of the many other changes that were enacted in Balanced Budget Act of 1997, HCFA is extending the 1998 enrollment period for an additional month until February 2, 1998.

For more information on private contracts, please refer to two articles: "Private Contracts" on pages 9-12 of your December 1997 Medicare Advisory *and "Private Contracts Q&A" on pages 3-7 of your January 1998* Medicare Advisory.

BEWARE of Surety Bond Companies: Beware! Some bonding companies are alarming physicians and other health care practitioners by stating that the government is requiring you to have surety bonds. The Balance Budget Act of 1997 requires that only durable medical equipment (DME) suppliers and home health agencies have surety bonds.

Physicians who do not provide DME supplies to Medicare patients and therefore do not have a Medicare DME provider number are not required to have surety bonds. Physicians who do provide DME supplies to Medicare patients and have a Medicare DME provider number will receive more information about surety bonds from the Medicare DME Carrier.

MEDICAID UPDATE

Medicaid Managed Care Update: Expansion of the Physician Enhanced Program (PEP) has begun in the following counties: Aiken, Allendale, Bamberg, Barnwell, Lexington, and Orangeburg. A community meeting has been scheduled to explain PEP to potential providers and other interested parties. The meeting time and location is listed below. *Please call Neal Martin, Ladovia Platt, or Donna Rothell for reservations at (803) 253-6134.*

January 15, 1998 at 10:00 a.m.
Sixth Floor, Classrooms A and B
Aiken Regional Medical Center
202 University Parkway
Aiken, South Carolina

PHYSICIAN'S BREACH OF A DUTY OF CONFIDENTIALITY

In November, the South Carolina Court of Appeals handed down the *McCormick v. England* decision which created a new cause of action in South Carolina for a physician's breach of a duty of confidentiality.

The plaintiff filed a lawsuit alleging her family physician breached a duty of confidentiality by disclosing information about her emotional health during a divorce proceeding involving her former husband. During the divorce proceeding, McCormick's former husband submitted a letter addressed "To Whom It May Concern" which was written by Dr. England. The letter stated that McCormick was suffering from "major depression and alcoholism, acute and chronic," and that McCormick was a "danger to herself and to her family with her substance abuse and major depressive symptoms." There was no evidence that Dr. England's letter was prepared under court order.

The only issue addressed by the South Carolina Court of Appeals in *McCormick* is whether South Carolina recognize a separate tort action for a physician's breach of duty of confidentiality. The Court of Appeals discussed this issue in detail and held:

> South Carolina should recognize the common law tort of breach of a physician's duty of confidentiality. Patients have the right to be candid in their disclosures of private information to their physicians without fearing that

(Continued on page 4)

SCMA MEMBERS SAVE TOTAL OF $12,200 PER MONTH WITH SPECIAL LONG DISTANCE PROGRAM—ARE YOU SIGNED UP YET?

South Carolina Medical Association's (SCMA) special long distance program with Telco Communications Group, Inc., has resulted in significant savings for participating SCMA members, their families, and employees. Groups and individuals who have signed up with our plan are saving an aggregate total of $12,200 per month compared to what they had paid before they switched to SCMA's special long distance rates. Here's why:

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SCMA WORKSHOPS

MEDICAL RECORDS: WHAT YOU DON'T KNOW MAY HURT YOU

The legal issues involving the confidentiality of medical records are becoming ever more complex. This seminar will address principles of confidentiality, the question of who has access to medical records, when information may be disclosed without patient consent, and the special issues involved in HIV, psychiatric, substance abuse, and sexually transmitted diseases. **Register by February 5, 1998.**

9:00 a.m. - 12:00 p.m.; Registration: 8:30 a.m.
or
1:00 p.m. - 4:00 p.m.; Registration: 12:30 p.m.
Columbia: February 12, 1998, Adam's Mark Hotel

ANALYZING CAPITATION AND MANAGED CARE REIMBURSEMENT RATES: ARE WE MAKING MONEY OR WHAT?

It is the question for the millennium: Do the capitation and managed care reimbursement rates allow us to operate profitably or are we losing money every time we perform a particular service or procedure? Every practice must be able to answer this question with respect to its most frequently performed services. When you leave this seminar, you will have an action plan that will allow you to reevaluate your managed care capitation rates and determine whether they make sense for your practice. **Register by February 19, 1998.**

9:00 a.m. - 12:00 p.m.; Registration: 8:30 a.m.
or
1:00 p.m. - 4:00 p.m.; Registration: 12:30 p.m.
Columbia: February 26, 1998, Adam's Mark Hotel

Space in each program is limited, so be sure to register early. *If you have any questions, please call Melissa Hamby, ext. 253, at 798-6207 in Columbia, or at (800) 327-1021 statewide, or by e-mail at melissa@scmanet.org.*

PCN UPDATE

It is **very** important that all providers keep Physicians Care Network (PCN) informed of address and tax ID number changes. You can call the number listed below or call or fax client services at (888) 323-9271. You may also fax your changes to (803) 771-9474. **Don't forget to enroll new physicians in PCN.** PCN provider participation is at an all-time high. There are now 5,436 participating physicians, 538 participating ancillary providers, and 76 participating hospitals.

PRECERTIFICATION PHONE NUMBER CHANGES

The phone number for precertification has changed. Please change your information to reflect the new toll-free number as (800) 447-7055.

PROVIDER DIRECTORY UPDATE

It is almost time to print a new provider directory. To ensure that the information printed is correct, please take a moment to look at the way you are listed and make sure that PCN has all of your locations and phone numbers listed correctly. *If you have questions, please contact Cindy Osborn at (803) 798-6207, ext. 257 in Columbia or at (800) 327-1021, extension 257. You may also send an e-mail message to cindy@scmanet.org.* ❐

BREACH OF DUTY (continued from page 2)

this information will be disseminated throughout the community. However, this right is not absolute and must give way when disclosure is compelled by law or is in the best interest of the patient or others.

It is unclear from *McCormick* which circumstances are exempt from the duty of confidentiality. Nevertheless, physicians should be cautious when disclosing patient information in light of this important decision. This decision could have broad repercussions in the many situations in which physicians and managed care organizations are called upon to provide information concerning their patients. The duty recognized in *McCormick* is prospective and, therefore, will only apply to the disclosure of confidential patient information after November 17, 1997.

PHYSICIAN RECOGNITION AWARDS

The following SCMA physicians are recent recipients of the AMA's Physician Recognition Award. This award is official documentation of Continuing Medical Education hours earned.

Robert S. Adams, M.D.
Denise D. Algood, M.D.
E. Eugene Baillie, M.D.
Thomas A. Ball, M.D.
Robert D. Baker, M.D.
Susan E. S. Baker, M.D.
Sylvia S. Barnes, M.D.
Christopher B. Benson, M.D.
John F. Biggers, M.D.
Douglas M. Brandt, M.D.
Stacey Brennan, M.D.
Jeffrey W. Buncher, M.D.
John B. Carter, M.D.
Stanley I. Coleman, M.D.
Stuart L. Cooper, M.D.
Samuel P. Davis, M.D.
John M. Dent, M.D.
Karen A. Devore, M.D.
Sami B. Elhassani, M.D.
Wayne G. Entrekin, M.D.
William J. Epperson, M.D.
Hector F. Esquivel, M.D.
John P. Evans, M.D.
Joseph F. Flowers, M.D.
Anthony J. Frank, M.D.
Thomas Funcik, M.D.
Donald L. Fylstra, M.D.
Abbott J. Garvin, M.D.
P. Gopalakrishnan, M.D.
William C. Griggs, M.D.
Tracy D. Gunter, M.D.
Samuel T. Haddock, M.D.
Douglas P. Harr, M.D.
Arlene Hay, M.D.
Gossie C. Heath, M.D.
Paul J. Hletko, M.D.
David O. Holman, M.D.
Robert M. Jones, M.D.
Stephen J. Kroll, M.D.
Shubhalaxmi A. Kudchadkar, M.D.
Annemarie C. Leventis, M.D.
Joyce A. Broadus Lewis, M.D.
Bruce H. Lobitz, M.D.
Robert A. Luke, M.D.
Ian Marshall, M.D.
Terry A. Marshall, M.D.
Landrum I. McCarrell, M.D.
Ann E. McCullough, M.D.
Alex B. McIntyre, M.D.
Mark E. Meijer, M.D.
Nicholas E. Mihelic, M.D.
Robert N. Milling, M.D.
Harold Gleason Morse, M.D.
Ernest E. Murray, M.D.
George J. Neff, M.D.
Vytautas A. Pakalnis, M.D.
David Perrick, M.D.
Lee R. Perry, M.D.
Olin H. Powell, M.D.
Samuel B. Pratt, M.D.
James M. Principe, M.D.
James C. Raff, M.D.
Angela D. Ritter, M.D.
Raymond Rosenblum, M.D.
Howard G. Royal, M.D.
William M. Scott, M.D.
Martin L. Schlein, M.D.
Robert C. Schnackenberg, M.D.
John R. Scott, M.D.
March E. Seabrook, M.D.
Philip O. Shillinglaw, M.D.
Frank J. Singletary, M.D.
Ronald L. Skinner, M.D.
Randolph D. Smoak, M.D.
Hollis P. Snead, M.D.
Shelley C. Springer, M.D.
John P. Taylor, M.D.
Robert L. Thomas, M.D.
Frank A. Trefny, M.D.
Kailenn Tsao, M.D.
Priscilla L. Welch, M.D.
Allen Richard Wenner, M.D.
Kevin O. Wessinger, M.D.
William E. Wheeler, M.D.
Steven K. White, M.D.
Mark C.Willingham, M.D.
John F. Zeedick, M.D. ❐

MARK YOUR CALENDARS!

The South Carolina Medical Association's Annual Meeting and Scientific Assembly is scheduled for April 23-26, 1998, at the Charleston Place Hotel, Charleston, South Carolina.

Editorials

HUMBLE ORIGINS

We celebrate next month the sesquicentennial of the founding of the South Carolina Medical Association—a turning point in the history of the medical profession in our state. It is fitting that we reflect this year on where we have been and where we are going.

To be sure, organized medicine and the medical profession are not synonymous. Since the first settlement of these parts by English-speaking peoples (1670), there have always been dedicated doctors who devote their lives to the care of others. Some of the early physicians left scholarly treatises on the mysterious fevers that claimed so many lives back then. However, their lasting reputations were usually made in other fields such as botany (Drs. Alexander Garden and Lionel Chambers), history (notably, David Ramsay), meteorology (Chalmers, Ramsay, John Lining, and Robert Wilson), politics (John Moultrie, Jr.), or patriotic service during the American Revolution (Peter Fayssoux and William Read). In medicine they were, by our standards, rather helpless for want of technology—and organization.

Dr. Joseph I. Waring, whose life has been chronicled recently in an excellent book published by the Medical University Press, includes a chapter about the state of medicine in 1848 within his history of our association. He begins:

> Physicians were not always in good standing with the general population. Newspapers did not hesitate to express a cynical regard for the doctor at frequent intervals, and there was some reason for questioning the soundness of a group in which membership was achieved by the possession of an elementary education and the absorption of the contents of brief courses of lectures. Proprietary medical schools with low standings made money while they turned out poor doctors. These institutions were regarded balefully by the better element of the profession, but flourished despite opposition.[2]

Public mistrust of medicine was indeed widespread. Thus, when J. Marion Sims told his father in 1832 of his plans to study medicine, the latter erupted:

> Well, I suppose that I can not control you, but it is a profession for which I have the utmost contempt. There is no science in it. There is no honor to be achieved in it, no reputation to be made, and to think that *my* son should be going around from house to house through the country, with a box of pills in one hand and a squirt in the other, to ameliorate human suffering, is a thought I never supposed I should have to contemplate.[3]

Sims achieved immortality by concentrating on surgery, not medical therapy. Although well-informed physicians could be found here and there throughout South Carolina in 1848, the leadership came from Charleston. Nearly 60 years earlier, Charleston physicians had banded together to form their Medical Society of South Carolina (1789) for the purposes of "improving the Science of Medicine, promoting liberality in the Profession, and Harmony amongst the Practitioners in this city." Charleston physicians launched two journals (the *Carolina Journal of Medicine, Science, and Agriculture* [1825] and the *Southern Journal of Medicine, Science, and Agriculture [1825] and the Southern Journal of Medicine and Pharmacy* [1845]) and started the Medical College of South Carolina (1824), now MUSC. To their lasting credit, they recognized the need for an organization that could represent physicians beyond their peninsula. They were led by James Moultrie, Jr., who had been active in the formation of the American Medical Association. It was these physicians who urged the formation of a statewide society similar to those being founded elsewhere:

> We would earnestly...call upon the profession throughout the State to come forward and join in one united effort for the elevation of our character and standing and by this means for the benefit of the community at large...The call is for a Convention of Physicians from the WHOLE STATE, not a part.[4]

The middle years of the nineteenth century spawned a great many medical societies of which ours is representative. The major concern during that movement was the need to raise the standards of medical education and medical practice. A secondary concern was medical ethics, understood in part as the way physicians related to each other (that is, etiquette). In future issues of *The Journal,* we shall explore these issues at greater length. The founders' firm belief that participation of "physicians from the WHOLE STATE" is necessary cannot, of course, be overemphasized. The future of medical science now seems secure, but nothing guarantees the future of the medical profession as we have known it. This is indeed a fitting time to reflect on our humble origins, to remember the founders, and to rededicate ourselves to their principles.

—CSB

REFERENCES

1. Donato AK, Oxner JO, eds. Joseph Ioor Waring: A true physician (Charleston, S.C.: Published for the Waring Library Society by the Medical University Press, 1997).
2. Waring JI. A brief history of the South Carolina Medical Association (Charleston, S.C.; South Carolina Medical Association, 1948).
3. Sims JM. The story of my life (New York:D. Appleton, 1884), 116.
4. Waring JI. A brief history of the South Carolina Medical Association (Charleston, S.C.; South Carolina Medical Association, 1948), 27.

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PROGRAM UNDERWRITER

As background reading for the following editorial, I would suggest a commentary entitled "Humanitarianism Under the Gun" in a recent issue of JAMA *(1997; 278:160). Dr. Stamler's compilation of volunteer opportunities will, I suspect, prompt at least some of our members to act in ways that even change their lives. Guest editorials reflect the opinions of the authors and do not necessarily represent the opinions of the officers and trustees of the South Carolina Medical Association.*

—CSB

VOLUNTEER OPPORTUNITIES FOR PHYSICIANS

Numerous organizations exist for the purpose of assigning physicians to medical volunteer positions around the world. There is an enormous need for medical expertise in many places, which is never-ending. For many, life is an almost hopeless turmoil, interspersed with disease, hunger, poverty, and political confusion. American physicians can do much to mitigate these ravages. The wages are in what is received in return—love, affection, thanks. There is nothing else to give.

Within every caregiver I've ever met lies a desire to go someday to a far place and practice solely for the joy of giving something away. This is one of the purest forms of charity. Many of the patients have never been to a health professional of any sort in their entire lives. When disease, blindness, disfigurement and more strike, there may be no one else to offer relief except volunteers from afar.

The following listing is far from complete, but does include many agencies and organizations which will assist the willing physician in locating an assignment. Some have phone numbers listed. Most offer hands-on care; others specialize in environmental control, immunizations, and providing teaching services. Some offer stipends; inquiry is suggested. Assignments vary from a few days to career-length. Personal expenses are usually tax-deductible. Applications made well in advance are recommended; a year is not too long. Questions to ask include necessity for passports, possibility of family members accompanying (and working), need for malpractice insurance (covered in most cases by the organization, and in most cases not required), need for immunizations, and transportation.

Arthur A. Stamler, M. D.
105 Altamont Terrace
Travelers Rest, SC 29690

1. *Accion/Aitec*
10-C Mt. Auburn St.
Cambridge, MA 02138
617-492-4930

2. *Action International Ministries*
P.O. Box 490
Bothell, WA 98011
206-485-1967
Philippines

3. *Adventist Development & Relief Agency International*
6840 Eastern Ave., NW
Washington, DC 20012

4. *Aesculapian International*
PO Box 1319
Santa Barbara, CA 93102
Most specialties; worldwide

5. *Africare*
1601 Connecticut Ave., NW
Washington, DC 20009
202-462-3614
Long & short-term

6. *Aid for International Medicine*
1828 Wawaset St.
Wilmington, DE 19806
302-655-8290
302-654-5848
Africa, Asia, South America

7. *Air Commando Association*
P.O. Box 7
Mary Esther, FL 32569
904-243-4601
Guatemala, 1 month minimum; Pediatricians

8. *AM-DOC/Option*
3502 Hancock St.
P.O. Box 81122
San Diego, CA 92138
Acts as info clearinghouse
U.S.; worldwide

9. *American Academy of Pediatrics*
Dept. of Community Pediatrics
141 Northwest Point Blvd.
Elk Grove Village, IL 60007
800-443-9016
Worldwide, pediatricians
Some volunteers, some paid

10. *American Council of the Ramabi Mukti Mission*
P.O. Box 4912
Clinton, NJ 08809
201-735-8770
India

11. *American Jewish World Service*
15 West 26th St.
New York, NY 10010
212-683-1161
World; most specialties

12. American Medical Association
Project USA
515 N. State St.
Chicago, IL 60610
800-388-4702
Rural U.S.

13. *American Medical Student Association*
1890 Preston White Dr.
Reston, VA 22091
703-620-6600
For medical students & residents

14. *American Near East*
Refugee Aid
1522 K St., NW-Suite 202
Washington, DC 20025

15. *American ORT Foundation*
817 Broadway
New York, NY 10003
212-677-4400

16. *American Red Cross*
17th and D Streets
Washington, DC 20006
406-737-8300

17. *The Americas-Hand in Hand*
P.O. Box 424
Billings, MT 59103
Short-term, 2-52 weeks
406-245-7426

18. *American Public Health Association*
International Health Programs
1015 15th St, NW
Washington, DC 20005
202-789-5600
Worldwide, few weeks as consultants

19. *American Refugee Committee*
2344 Nicollet-Suite 350
Minneapolis, MN 55404
612-872-7060
Asia

20. *Americares Foundation*
51 Locust Av.
New Canaan, CT 06840
203-966-5195
Asia, Africa, Latin America
Term of service varies

21. *Amigos de las Americas*
5618 Star Lane
Houston, TX 77057
713-782-5290
Latin America; 4-8 weeks in summer

22. *Brother's Brother Foundation*
P.O. Box 6067
Pittsburgh, PA 15211
Rescue operations in natural disaster; immunizations

23. *CAM International*
8625 La Prada Drive
Dallas, TX 75228
214-327-8206
Central America; Spain
Mostly short term

24. *Canadian University Services Overseas*
151 Slater St.
Ottawa, Ontario K1P 5H5
Canada

25. *CARE-Medico*
2007 Eye St. NW
Washington, DC 20006
Central America, Middle East, Asia, Africa. Short & long-term
Volunteers, especially orthopedics

26. *Catholic Medical Mission Board*
10 West 17th St.
New York, NY 10011
212-242-7757
Worldwide, short & long-term

27. *Catholic Relief Services*
1011 First Ave.
New York, NY 10022
212-838-4700

28. *Christian Medical Society*
P.O. Box 689
Richardson, TX 75080
Worldwide, most specialties

29. *Christian Medical College*
Board USA (Inc)
475 Riverside Dr.
New York, NY 10155
India, short term only

30. *Church World Service, Overseas Personnel, National Council of Churches in Christ in the USA*
475 Riverside Dr.
Room 652
New York, NY 10027
212-870-2368
Short & long-term

31. *Claretian Volunteers*
4501 So Ashland
Chicago, IL 60609
312-247-3325
Guatemala

32. *De Pauw University Winter Term in Mission*
Chaplain's office
Greencastle, IN 46135
317-658-4619
1 month in January each year

33. *Direct Relief Foundation*
P.O. Box 1319
Santa Barbara, CA 93102
Worldwide and US

34. *Direct Relief International*
Volunteer Medical Services
P.O. Box 30820
Santa Barbara, CA 93130-0820

35. *Doctors of the World*
625 Broadway, 2nd Floor
New York, NY 10012
888-817-HELP
Worldwide, most specialties

36. *Dooley Foundation*
420 Lexington Av.
New York, NY 10017
212-867-3620

37. *Esperanca Inc.*
1911 West Earll Dr.
Phoenix, AZ 85015
Brazil, 3 weeks, surgeons only

38. *Eye Care, Inc.*
523 Eighth St., SE
Washington, DC 20003
202-544-4700
Haiti; ophthalmologists only

39. *FOCUS, Inc.*
Dept of Ophthalmology
Stritch School of Medicine
Loyola University
2160 So First Ave.
Maywood, IL 60153
312-531-3408
Ophthalmologists only

40. *Global Outreach*
P.O. Box 1
Tupelo, MS 38802
601-842-4615
Haiti, Uganda, Uganda
GP, Internists

41. *Heal the Children*
P.O. Box 6051
Spokane, WA 99207-0901
509-489-2015
Worldwide, pediatricians and specialists

42. *Health Volunteers Overseas*
c/o Washington Station
P.O. Box 65157
Washington, DC 20035-5157
202-296-0928
Worldwide; most specialties

43. *Hospital Albert Schweitzer*
Haiti
150 Kennedy Drive
South Burlington, VT 05403
802-862-7503 (nights and weekends)
Haiti; 1 month minimum

44. *International Lifeline*
P.O. Box 32714
Oklahoma City, OK 73123
405-728-2828
Haiti, Tanzania, Kenya 2-8 weeks (No longer)
GP; OB; Peds

45. *International Medical Corps*
10880 Wilshire Blvd., #2008
Los Angeles, CA 90024
310-670-0800
Worldwide; most specialties

46. *International Program Development Center*
55 Chapel St.
Newton, MA 02160
617-969-7100
2 weeks-1 year; physicians are hired as consultants (salary)

47. Interplast
378-J Cambridge Ave.
Palo Alto, CA 94306
415-329-0670
Plastic & reconstructive surgeons; pediatricians.
Short-term

48. Helen Keller International
15 West 16th St.
New York, NY 10011
212-620-2100
Worldwide. Ophthalmologists, pediatricians, public health

49. *La Buena Fe Association*
P.O. Box 2
Independence, MO 64051
816-229-9252
Honduras, 2 weeks, health teams

50. *LBJ Tropical Medicine Center*
Pago Pago
American Samoa 96799
684-633-2732
3-13 mos + stipend

51. *Lutheran World Relief*
360 Park Ave.
New York, NY 10010
212-532-6350

52. *MAP International*
Mrs. J R. Knighton
P.O. Box 50
Wheato, IL 60187
Developing countries

53. *Marimed Foundation*
1050 Ala Moana Blvd. Bldg D
Honolulu, HI 96814
808-537-5586
Hospital ship to Micronesia
7 Marshall Islands
3 months minimum

54. *Medical Group Missions*
Christian Medical Society
1122 Westgate
Oak Park, IL 60301
Caribbean, Liberia
Short- term volunteers

55. *Mission to the World*
P.O. Box 1174
Decatur, GA 30031
404-292-8345
Worldwide, long & short-term
GP and OB

56. *National Council for International Health*
2121 Virginia Av. NW
Washington, DC 20037
202-298-5905
Most specialties, short & long-term

57. *Orthopedics Overseas*
P.O. Box 57465
Washington, DC 20037

202-466-6106
Worldwide orthopedics

58. *Peace Corps/ACTION*
806 Connecticut Av, NW
Washington, DC 20525
800-424-8580 ext. 84

59. *Physicians for Peace*
229 West Bute St.
Suite 820
Norfolk, VA 23510
804-625-7569
Worldwide; most specialties

60. *Project Concern*
P.O. Box 81123
San Diego, CA 92138
US and abroad

61. *Project Hope*
Health Science &
Education Center
Millwood, VA 22646
Worldwide. Primary goal is improvement of health conditions. Long & short-term

62. *Project Orbis*
330 West 42nd St. #1900
New York, NY 10036
212-244-2525
Flying eye hospital staffed by ophthalmologists. Four week minimum

63. *Remote Area Medical Volunteer Corps*
1834 Beech St.
Knoxville, TN 37920
423-579-1530
Western hemisphere, Appalachian.
3-14 days & weekends

64. *Rescue Now*
870 Market St.
Room 1050
San Francisco, CA 94107
415-433-3055
Guatemala, El Salvador and Somalia. Two week terms

65. *Southern Baptist Conference Foreign Mission Board*
P.O. Box 6767
Richmond, VA 23230
Worldwide; most specialties

66. *Surgical Eye Expeditions, International*
1216 State St., Suite 310
Santa Barbara, CA 93101
805-963-3303
Worldwide. Ophthalmologists. Three-14 days

67. *Volunteer Optometric Services Humanity*
P.O. Box 310
Rolla, MO 65401
314-364-1773
Ophthalmologists; short-term mostly
Latin America and the Caribbean

68. *World Gospel Mission*
P.O. Box WGM
Marion, IN 46952
317-664-7731
Kenya, Honduras
2 week term

69. *World Relief Corporation*
P.O. Box 2836
Washington, DC 20013

70. *World Witness-Board of Foreign Missions for the Associate Reformed Presbyterian Church*
1 Cleveland St
Greenville, SC 29601
864-233-5226
Pakistan; 2 week minimum

Dr. Stafford prefaced the following guest editorial with a notation that the inspiration to write came to him at 5:00 a.m. one day. All of us certainly need reminders of our basic principles from time to time! Guest editorials reflect the opinions of the authors and do not necessarily represent the opinions of the officers and trustees of the South Carolina Medical Association.

—CSB

WHY IS GOD IN THE ATTIC OF THE HOUSE OF MEDICINE?

When recently rummaging through my attic for an object long since seen, it occurred to me that so often we forget, store or misplace things once dear to us in the attic of our homes. Those cherished "things" become easily forgotten as time goes by. They are not rediscovered until a time of "searching" directs our attention to the "attic of our innersouls," and we must stumble upon "something" coincidentally that was once of great value to us. Some would call this a COINCIDENCE, but maybe, just maybe, it was a MIRACLE in which God wished to remain anonymous. And maybe, just maybe, that thing for which we searched, was Christ, Himself.

In today's world and "house of medicine," so constantly changing, with the onset of managed care, gate keepers and the "business," instead of the "practice" of medicine, have not medical ethics, the gifts and love of God, and justice been placed in the "attic of our house, "so easily stored and too easily forgotten?

MEDICAL ETHICS are OBLIGATIONS of a normal nature that govern the practice of our CHOSEN field of endeavor. They embody the standards by which we practitioners would inform their conscience, their capacity for MORAL REASONS, and so govern ourselves. And it is the RESPONSIBILITY OF OUR PROFESSION to develop its ethics to accommodate new demands (i.e. business of medicine).

WHATEVER HAPPENED to the concept of treating patients as human beings? When did the direction of medicine shift to the treating of a disease process, DRG's, days in the hospital, and will insurance cover it or not? WHATEVER HAPPENED to remembering the dignity of our patients, and the fears and apprehensions of their families and care givers? WHATEVER HAPPENED to the notions that the love of caring for consists in giving without getting in return, and giving what is not owed, and what is not due the other.

WHATEVER HAPPENED to the humility of medicine, the ability to say "I NEED HELP" without fear of someone thinking of us as less than perfect? WHATEVER HAPPENED to prayer, and the acceptance of the all important fact that "what we do is nothing but an extension of the hand of God!"

Some of "WHAT HAPPENED" is to be placed on medical education itself, whereby the young doctor is taught to be "omnipotent," always to strive for perfection, the need to be the perfect husband, father, and provider, all giving and yet always to react immediately when the beeper goes off."

WHATEVER HAPPENED to the acceptance that "good and doing our best is good enough?" WHATEVER HAPPENED to the ability to admit when we make a mistake, to pursue honesty to correct it, and to be willing to take responsibility for it?

I think what happened is that our morals and our God who we cherished so as children, somewhere along the line, got misplaced in the attic of our lives.

ISN'T IT TIME TO OPEN THE DOOR TO THE ATTIC, AND BEGIN OUR SEARCH ANEW!

Robert H. Stafford, M. D.
200 Rutledge Avenue
Charleston, SC 29403

Letters to the Editor

To the Editor:

I wrote an article about cystourethropexy called "A Modified Cystourethropexy in Management of Incontinence and Dyspareunia" some years back. I stopped counting at about 250 cases. So I have more than that. There is one modification I would like to make in the dissection on this, not to dissect on the lateral borders of the bladder but to leave it on just so that it actually looks like a webbed bit of tissue on either side of the bladder. If one dissects all of that off, the postoperative course is complicated by a lot of bladder spasms. That is the only modification that I made in the procedure itself. The nice part about it is that I don't know of any of them to have come down since I started doing it this way and subsequent to this paper, I did two patients who had no leakage or painful cystoceles but for dyspareunia. Evidently, the paper was not as clear as to the placement of the sutures used to put the bladder back in place. I use the edge of the rectus fascia and go back a centimeter and a half down through the anterior rectus sheath down to the rectus muscles and gather up the bladder, trying to get about 3 centimeters of anterior bladder wall and attaching it coming up on the other side through the rectus muscle and through anterior rectus fascia and tying just enough to bring the bladder up so that I would have a broad base of scarring. This is done as high up as the bladder comes and care must be taken not to place your most upper most suture so as to put undue pressure on the top of the bladder.

I usually stop at about a centimeter from the top of the bladder. The Penrose drain is placed and the fascia closed with whatever suture one desires to close it with. I do not worry about getting the #1 chromic gut into the bladder. That doesn't seem to matter though the patient may bleed a little bit post-op.

I am aware of the present methods of suspensions; however, a little more time in the hospital and a little longer post-op course is worth it for a real chance of permanent cure.

Jack M. Graham, M. D.
225 East Wood Street
Suite 1
Spartanburg, SC 29303

On the Cover:

THOMAS ANTLEY PITTS, II, 1893-1991

Born in the Big Creek Section of Edgefield County on April 15, 1893, Thomas Antley Pitts, II, was educated at home by a governess and then attended Newberry College for two years (the second year was interrupted by an appendiceal abscess which was successfully drained by Columbia physician, LeGrand Guerry) before transferring to Camp Hill College in Alabama. He did not graduate. After trying farming, selling automobiles and insurance, and several other types of employment, he was persuaded by a brother-in-law to try medicine. Tom, with the help of an uncle, Luther Blease, gained a district scholarship to the MCSSC* through Governor Coleman Blease. After some deliberations, the registrar decided that if Tom had the audacity to come to medical school without a high school or college diploma and no record of any schooling, he deserved a chance to stay, especially since he was on a Governor's scholarship.

Dr. Pitts later related that most of the medical students had no money, and he worked as a night watchman at The Charleston Museum and was a junior intern at Roper Hospital where he earned 8 1/3 cents a month plus room and board. Following graduation in 1916 and an internship at Roper Hospital, he accepted a job as an instructor in pathology under Dr. Kenneth Lynch where a lasting friendship began.

At the outbreak of World War I, Dr. Pitts volunteered for the Army. He was inducted into service by Dr. Billy Smith at Fort Moultrie on Sullivan's Island. Dr. Pitts spent time on the front lines where, he recalled, doctors spent most of their time "packing blow holes and shooting morphine." He noted the limited radio communication and the lack of antibiotics.

After the war,. Dr. Pitts practiced for a year in Saluda before answering an advertisement in a medical journal which offered hospital administrative training to physicians. When he arrived in Shreveport, Louisiana, his supervisor asked if he would be interested in learning radiology. (The head of the Radiology Department had quit the day before). Having no training and no real alternative, Dr. Pitts proceeded to study and review all of the radiology textbooks that he could find and practice on the x-ray department's cat. (X-ray was discovered only 25 years earlier.) After two years in Louisiana, he went for study at the Mayo Clinic and Cook Hospital in Chicago. There he visited the General Electric (GE) Company which was producing x-ray tubes and equipment. GE asked him to supervise the installation of equipment at the Baptist Hospital in Columbia. This beginning of a long association with Baptist Hospital was in 1923.

The friendship with Kenneth Lynch was extended and strengthened after Pitts' election to the Board of Trustees of the Medical College by the state Legislature. His candidacy had been suggested by his cousin, Sam Blease, a member of the Legislature from Saluda. Dr. Pitts served actively on this board from 1931 until 1966, in 1940 as vice-president and from 1941-1951 as president. When the title changed to chairman, he served in that capacity from 1951-1966. In 1982, Dr. Pitts was elected to emeritus status on this board, which he held until his death in 1991.

Dr. Pitts served as president of the Columbia Medical Society in 1927, as Chairman of Council of the South Carolina Medical Association (SCMA) for seven years, chairman of the Legislative Committee of SCMA for 10 years, and president of the SCMA in 1943-44. He received the Distinguished Alumni Award and an honorary degree of Doctor of Humane Letters from the

Medical University in 1982. In addition to his political activities and medical interests, Dr. Pitts enjoyed gardening, hunting, and fishing and was a champion bridge player.**

Jane McCutchen Brown
Curator, Waring Historical Library

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*Medical College of the State of South Carolina

**Acknowledgement and thanks are due to G. Badger Humphries, Jr., M.D. Much of the material for this cover story was drawn from his paper on Dr. Pitts presented to the Columbia Medical Club on September 21, 1982.

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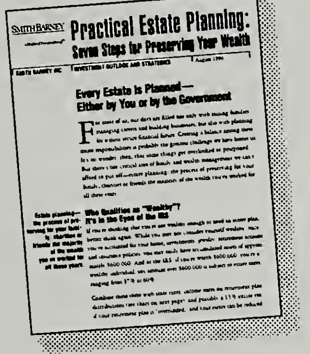

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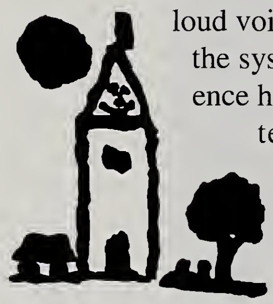
SOUTH CAROLINA CHILD PROTECTION ADVISORY COMMITTEE



The South Carolina Child Protection Advisory Committee (SCCPAC) is a quiet sub-committee of the South Carolina Medical Association Alliance (SCMAA). However, it has raised a loud voice across the state and nation with efforts to advance its mission to strengthen the systems which serve children and families. The annual multidisciplinary conference has served as a vital tool in education and training for professionals and volunteers involved with child welfare issues. On April 2, 1998, the second "Through the Eyes of a Child" conference will be held in Columbia at The Zone. The general theme is substance abuse and its relationship to child abuse. This conference has achieved a statewide reputation for excellence, and the SCMAA deserves praise for its sponsorship.

But SCCPAC has received national recognition through the 1994 Art Project conducted as part of the Child Welfare Reform Initiative. The art produced by the children has been exhibited in many events, including two policy summits in Washington, D.C. It has also been featured in national publications and training videos for the W.K. Kellogg Foundation. The graphic expressions reflect the spectrum of emotions children in foster care experience, from optimism to hopelessness and frustration. This incredible artwork has served as a motivation and inspiration for changes in welfare systems across the nation. The medical community of South Carolina should be proud of ownership of this unique and compelling collection. It is the desire of SCCPAC to create a permanent exhibit for display, perhaps at the State Museum.

The SCCPAC will continue to honor the courage of the children who expressed the need for change through the innocent media of crayons and paint by providing a forum for agency and community representatives to address child-related issues, and to promote education and advocacy on optimal child development. By working together and sharing talent, time, resources, and vision, the SCCPAC hopes to assure a positive and bright future for the young "artists" of South Carolina.

Paddy M. Bell
SCCPAC Chairman

INFORMATION FOR AUTHORS

The mission of *The Journal* is to advance the art and science of medicine; to promote the ideals of the South Carolina Medical Association; to encourage scholarship and good will among South Carolina physicians; and to disseminate information specifically applicable to the health care of South Carolinians. We encourage original articles and letters to the editor of potential benefit and interest to the members of the South Carolina Medical Association.

CORRESPONDENCE: All manuscripts and correspondence should be addressed to The Editor, *The Journal of the South Carolina Medical Association*, P.O. Box 11188, Columbia, SC 29211.

COPYRIGHT: All manuscripts should be accompanied by a transmittal letter to the editor, which should contain the following paragraph:

"This original work has not been submitted or published elsewhere, in entirety or in part. I (we) hereby transfer, assign, or otherwise covey all copyright ownership to the South Carolina Medical Association in the event that this work is published by the SCMA."

We request authors to advise the editor of any prior or anticipated duplication of their work in other publications. Submission of material as a "companion article" to material submitted elsewhere is discouraged.

PRIORITY FOR PUBLICATION: *The Journal* was founded in 1905 especially as a place for practicing physicians to publish their original observations. This purpose continues to receive priority. Growth of institutions, especially of medical school faculties, during this century may be, at least in part, responsible for a decreased tendency for practicing physicians to attempt scholarly work. Concerned about this trend, *The Journal* encourages practicing physicians to report original observations, including series of cases or individual case reports.

The Journal also welcomes timely review articles by institution-based physicians. However, it is the philosophy of the Editorial Board that state medical journals do not represent an appropriate forum for research findings of a specialized nature. Such findings, it is felt, belong in national or regional specialty or subspecialty journals. Articles by institution-based physicians should serve the information needs of a general physician readership. Articles dealing with social, economic, and ethical issues are strongly encouraged. Historical or philosophical essays are also welcomed, although these are given lower priority compared to the above categories.

On account of both space limitations and also our desire to encourage scholarship by as many South Carolina physicians as possible, it is our policy to decline publication of more than two (2) manuscripts by one author or group of authors within any calendar year or 12-month period.

REVIEWING AND RESPONSIBILITY TO READERSHIP: We will make every effort to review manuscripts promptly. All manuscripts will be reviewed by our editorial office, and when indicated the opinions of outside consultants will be solicited.

We welcome criticisms of journal content by members of the South Carolina Medical Association.

FINANCIAL DISCLOSURE: Upon acceptance of manuscripts for publication, we require disclosure of financial interest in pharmaceutical firms or other business enterprises when such disclosure seems to be appropriate to the editor or to members of the Editorial Board.

TYPES OF ARTICLES ESPECIALLY WELCOMED FOR CONSIDERATION

1. Original scientific observations (including case reports) made by practicing physicians.
2. Concise, timely review articles (see "Priority for Publication").
3. Articles pertaining to current social, economic, and/or ethical issues affecting the practice of medicine.
4. Information uniquely pertinent to the health care of South Carolinians.

REPRINTS: These will be made available by the printer at established rates, at the time of mailing of galley proofs.

LENGTH OF ARTICLES: We prefer concise articles of approximately 2,500 words (approximately eight typewritten pages, double spaced), with no more than 10 references.

We regret that space considerations limit our ability to publish longer articles, and request that authors adhere to the above guidelines. Similarly, tables and illustrations (see below), should be kept to a minimum, and be specific and pertinent.

Authors desiring to make additional data or additional references available to readers are encouraged to do so by adding footnotes to the effect that "additional references (or tables derived from this data base, etc.) are available from the author(s) upon request."

MANUSCRIPTS: If available, these should be furnished on a 3 1/2" disk, with two typewritten hard copies. Otherwise, they should be typewritten, double-spaced, and on one side of the paper. The original and one copy should be submitted. The title page should indicate the title, author(s), author's address, and academic appointments, if any. We request that the author's name not appear on subsequent pages, to permit "blind" review of the article, when desired. Authors should retain one copy for use in proofing. Written correspondence concerning proposed (potential) manuscripts is welcomed.

ILLUSTRATIONS: These should be submitted as glossy, black and white prints no larger than a standard page; smaller prints are desired. Ordinarily, publication of four small illustrations or tables, or the equivalent, will be paid for by *The Journal*. Any number beyond this must be paid for by the author except under unusual conditions. Illustrations should not be mounted, stapled, or clipped. On the back side of each illustration, the article title, figure number, and top of figure (but not the author) should be noted lightly in pencil. Legends for illustrations should be typed on a separate sheet of paper.

REFERENCES: These should be cited consecutively in the text, in superscript, e.g., "Bottsford, et al.3 ..." We recommend no more than 10 references, selected from more recent publications in accessible journals in most instances. Standard journal abbreviations should be used, with the style for journal article being as follows:

3. Bottsford JE, Bearden RC, Bottsford JG; A ten year community hospital experience with abdominal aorta aneurysms. J SC Med Assoc 79:57-62, 1983.

SYMPOSIUM ISSUES: We welcome proposals for special symposium issues. Guidelines for Guest Editors of symposium issues are available from *The Journal* office.

MATERIAL FOR COVER: The illustrations for the cover of *The Journal* are selected by the Curator of the Waring Historical Library, Charleston, S.C. *The Journal* welcomes suggestions and illustrations for the cover. Such suggestions should be sent to the editorial office.

ROE FOUNDATION AWARDS

Through a gift by the Roe Foundation, a Thomas A. and Shirley W. Roe award of $3,000 has been given each year since 1985. The award is given on alternate years to a practicing physician or to an institution-based physician.

All manuscripts submitted by South Carolina physicians will be considered for the award. Thus, manuscripts should not be submitted specifically for this award; rather they should adhere to our priorities for publication. On alternate years, all articles published during the previous two years by either practicing physicians or by institution-based physicians are reviewed and judged by our Editorial Board. The board may consult, when appropriate, with outside referees prior to rendering its decision.

Presentation of the award is made before the House of Delegates at the Annual Meeting of the South Carolina Medical Association.

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Gray Matter

"Matters of Interest to South Carolina Physicians."

Thornton & Thorne give the medical community something to think about this month.

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$2,000	20.8	17.9	16.5
$2,500	18.7	15.8	14.5
$3,000	15.8	14.5	12.8

Example: If you earn 8% per year and can save $2,000 per month, it will take 17.9 years to accumulate $1,000,000.

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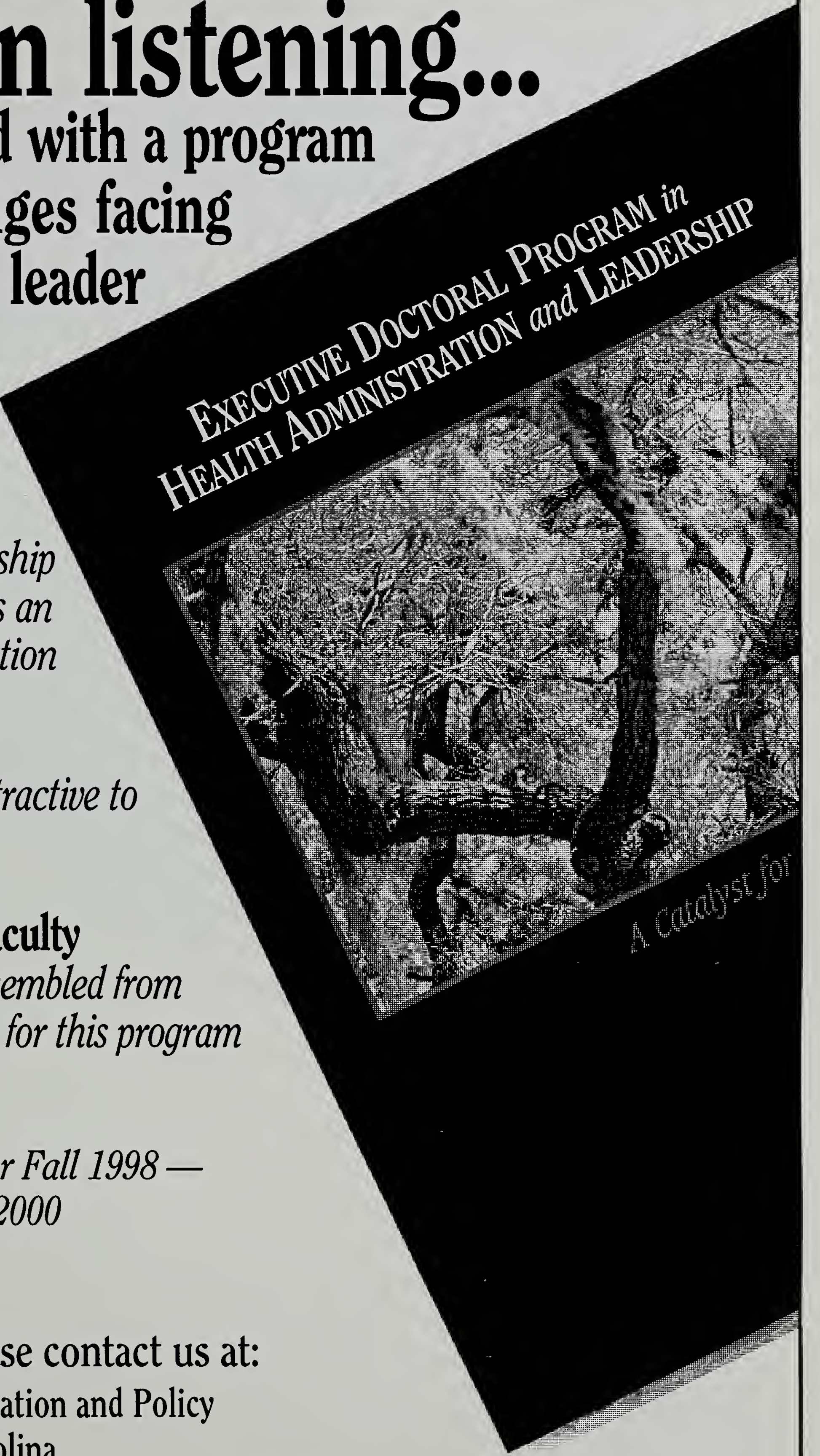

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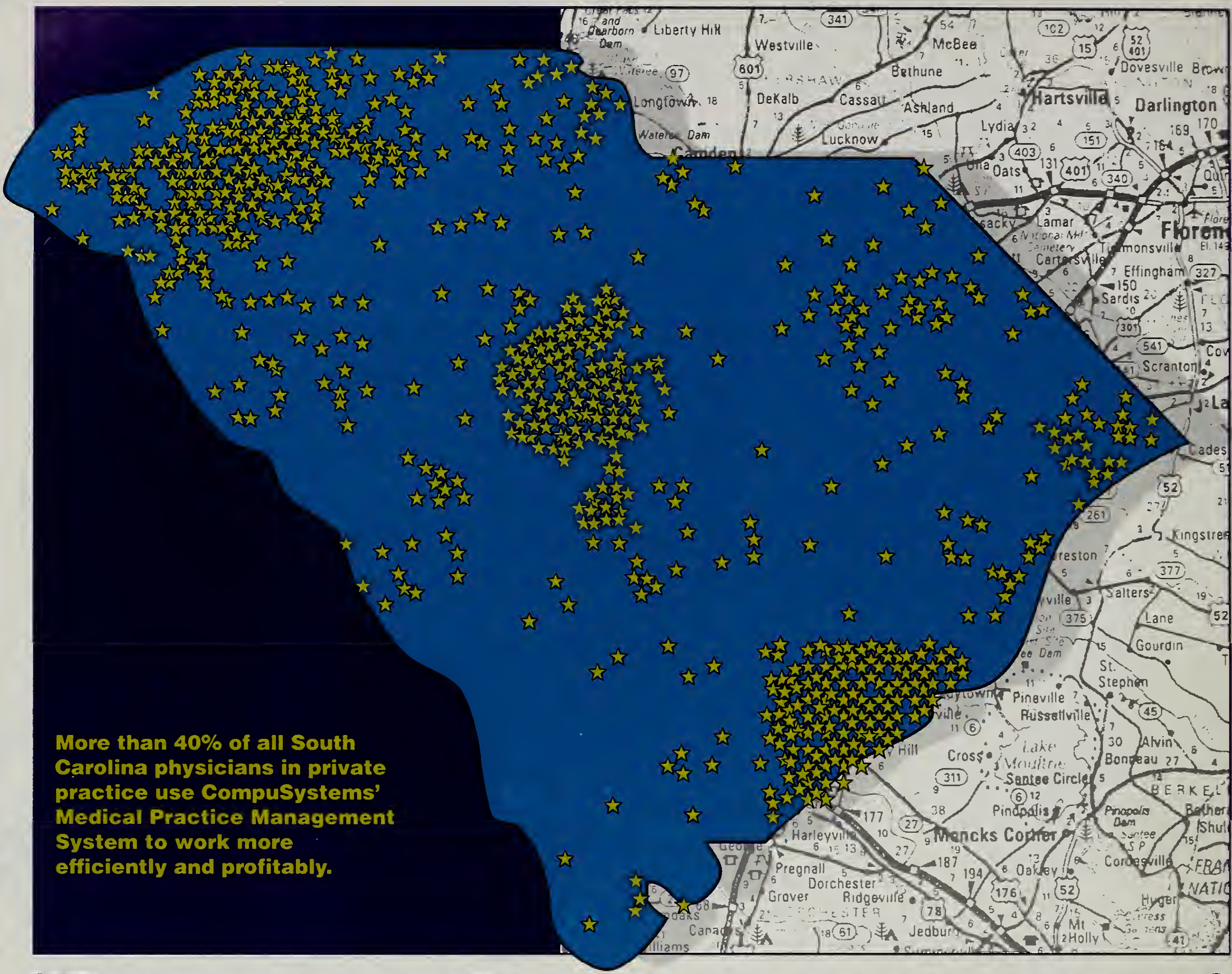

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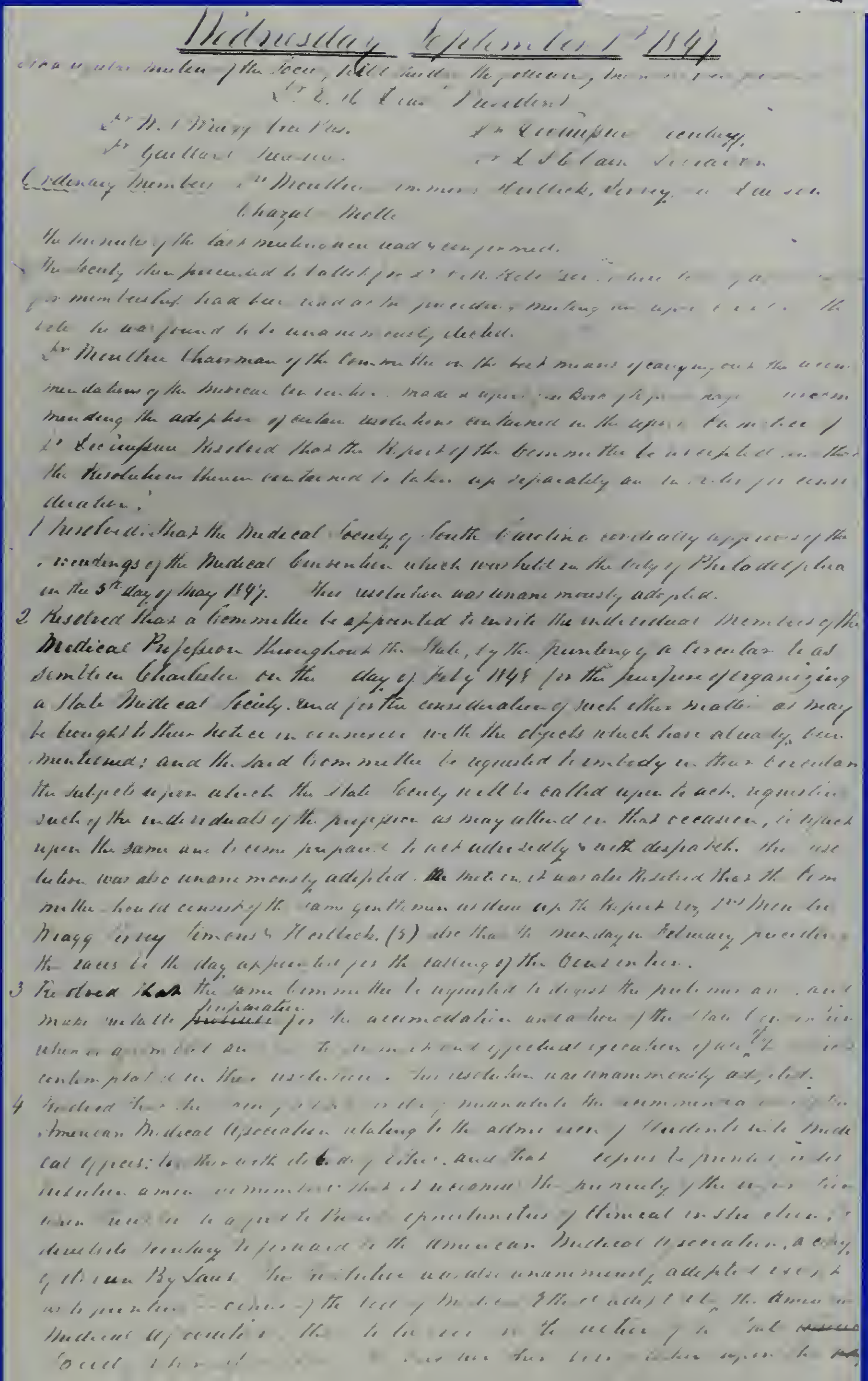

Wednesday September 1st 1847

[illegible]

1 Resolved, That the Medical Society of South Carolina cordially approves of the proceedings of the Medical Convention which was held in the City of Philadelphia on the 5th day of May 1847. This resolution was unanimously adopted.

2 Resolved that a Committee be appointed to invite the individual Members of the Medical Profession throughout the State, by the printing of a Circular to assemble in Charleston on the day of Feby 1848 for the purpose of organizing a State Medical Society, and for the consideration of such other matters as may be brought to their notice in connexion with the objects which have already been mentioned; and the said Committee be requested to embody in their Circular the subjects upon which the State Society will be called upon to act, requesting such of the individuals of the profession as may attend on that occasion, to reflect upon the same and to come prepared to act advisedly & with despatch. This resolution was also unanimously adopted. [illegible]

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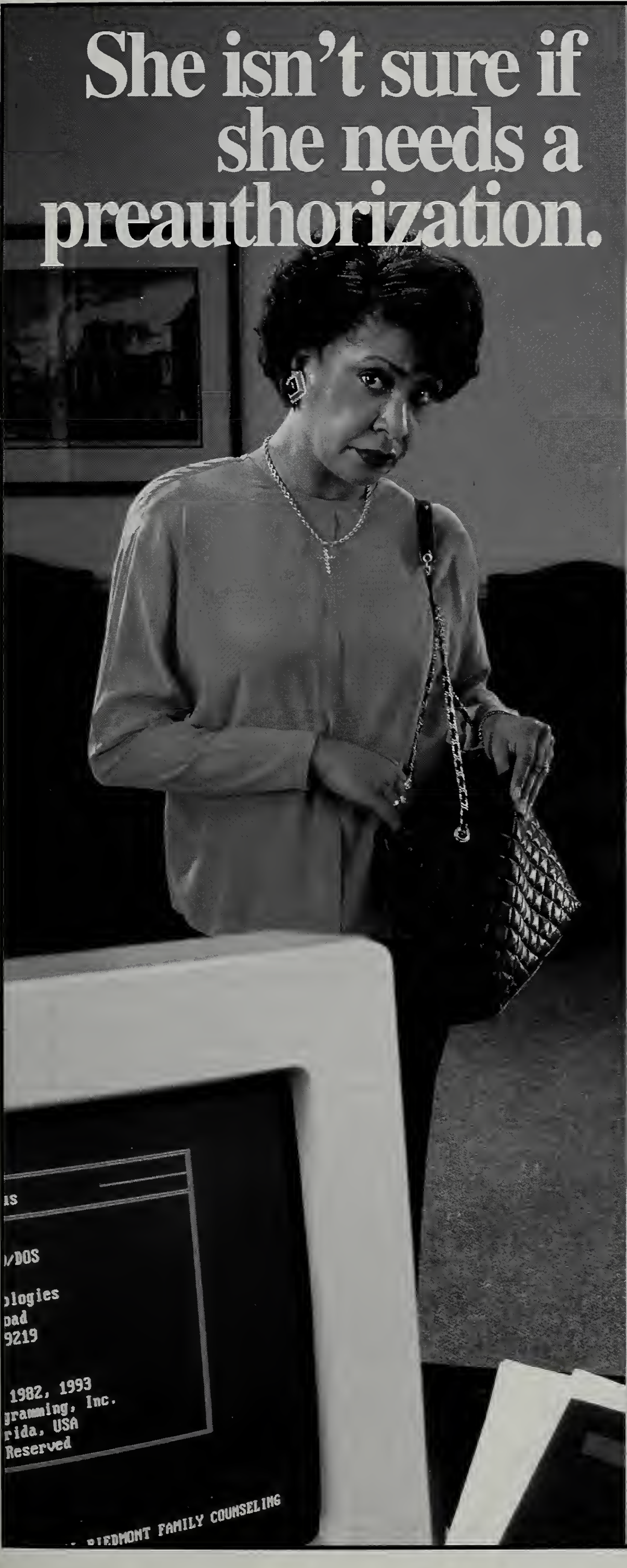

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President's Page

BIRTHDAYS

150 Years

1848 - 1998

The South Carolina Medical Association (SCMA) is having a birthday. It is our sesquicentennial—150 years old! In preparing for this special occasion, I was reading the centennial history of the SCMA authored by the late Joseph Ioor Waring, M.D. I could not help grouping birthdays and Dr. Waring together and thinking of my father's birthday, since Dr. Waring attended over 30 of them.

In my family, the world stopped on August 25 which was my father's birthday. We would all be in Highlands, North Carolina, and Daddy would be on vacation. Like so many doctors of his era, he would have spent a busy year. He would have had very little time off with constant call and taking care of sick children. His birthday was a time for celebration, and it was also a time for renewal. You could see his batteries being recharged by family and friends, and he would return to Columbia in September a new man.

My father's birthday was also a time for growth as attending the birthdays for many decades were Joe and Ferdi Waring of Charleston along with Samuel Gaillard Stoney, who was a prominent South Carolina writer and storyteller par excellence. There would be several other couples at the celebration. The Cranstons from Augusta, the Leagues from Greenville, and my brother, sister, and me. We attended these birthday parties from the time we were knee-high until we were young adults with families of our own. We were enthralled by the conversation. Joe, Sam, and Daddy had been friends since childhood and between them, they seemed to know about everything. History, medicine, adventure, a few off-color jokes; the conversation was as good as it gets. It was one tremendous educational experience for the Weston children.

So, when I reflect on the SCMA's birthday, I am hopeful that it will have the same ingredients as my father's birthday. It should be a time of celebration, renewal, and growth.

Yes, a time for celebration! Celebrate our contributions to the health of South Carolinians from the early years of treating cholera to the present organ transplants and everything in between. We should be proud of our accomplishments. We should celebrate our ethical code as that was our reason for organizing in the first place and it continues to be our moral compass. Then, let us renew the covenant with patients and society by always putting our patients' interests first. Let us maintain the growth of our organization by being aware of our membership needs. Although we are 150 years old, let us act like a young, mature adult who has the fire in his belly to provide the leadership that is necessary to make South Carolina the healthiest state in the nation and the best place to practice medicine in the entire world.

S. Nelson Weston, M. D.
President

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A PUBLICATION OF THE SOUTH CAROLINA MEDICAL ASSOCIATION

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February 1998

HIGHLIGHTS OF THE BOARD OF TRUSTEES MEETING

January 10, 1998

Board of Trustees Replacement: The board approved the nomination by the Spartanburg County Medical Society of Timothy Llewelyn, MD, to fill the unexpired term of Michael Holmes, MD.

Michigan Medical Society Request: The board agreed to participate as a sponsor in the Michigan Medical Society case study dealing with seven large "fully integrated" group practices.

Physical Therapy Direct Access Bill: The board agreed to support a compromise of H. 3784, allowing direct access to physical therapy services and mandating referrals to physicians after 30 days.

Members' Insurance Trust (MIT): The board approved nominations of Drs. L. Thomas Barnett and Thomas C. Appleby for reelection to MIT Board. ❐

MEDICARE UPDATE

You should have received the February 1998 *Medicare Advisory* from Palmetto Government Benefits Administrators, the South Carolina Part B Medicare Carrier. The *Medicare Advisory* contains important information and should be read carefully. *If you have any questions, you may call the Medicare Part B Customer Services Center at (803) 788-5568 or the SCMA at (803) 798-6207 or (800) 327-1021.*

Claims Status Inquiries: Effective February 1, 1998, Medicare will require all claim status inquiries to be handled via the Automated Response Unit (ARU) or via electronic Claims Status Inquiry (CSI). The customer service center will no longer be able to discuss the status of Medicare Part B claims with you.

Explanations of Medicare Benefits: Medicare will no longer mail Explanations of Medicare Benefits (EOMBs) for claims that have no resulting beneficiary liability. Therefore, claims for laboratory, influenza, and mammography will no longer generate EOMBs to your patients. Health Care Financing Administration (HCFA) also instructed Medicare to no longer mail EOMBs where the claim is a crossover or coordination of benefits claim and there is no resulting beneficiary liability.

Please refer to the February 1998 Medicare Advisory, *pages 42 and 47, for more information on how to utilize the AUR and CSI.*

Private Contract Reminder: If you opt out of the Medicare program via a private contract, you opt out for all non-emergency services to Medicare beneficiaries, regardless of the place of service or group affiliation. For example, if you work at two different group practices, neither group practice would be able to bill for or receive Medicare payment for your services.

When opting out of the Medicare program, be sure to terminate your reassignment of benefits to the groups you work for if the groups are Medicare-participating providers. As a courtesy to the groups, you should notify them that you have opted out of Medicare. If the groups you work with are non-participating, you may leave the reassignment of benefits intact.

(Continued on page 4)

RISK MANAGEMENT PROGRAM FOR NEW PHYSICIANS

The next Risk Management Program for newly licensed physicians will be held at the South Carolina Medical Association (SCMA) headquarters on **Friday, May 15, 1998**. There will be two sessions offered, 9:00 a.m. - 12:00 p.m. and 1:00 p.m. - 4:00 p.m. To register, call Cindy Osborn in Columbia at 798-6207, ext. 257 or statewide at (800) 327-1021. This program is sponsored by the Joint Underwriting Association (JUA)/SCMA Physician Risk Management Committee for physicians entering their first or second year of practice. Attendance at the program will enable new physicians in their first year of practice to obtain a 50 percent reduction in their JUA/Patients' Compensation Fund (PCF) professional liability premium and a 25 percent reduction for the second year. There is no registration fee.

Objectives of Program

At the end of this session, the attendee should be able to:

- Name the more common causes of medical malpractice.
- List several prevention strategies to avoid medical malpractice.
- Recognize the role of communication with patients in risk management.
- Outline the key points in record management as a role of risk management.
- Enumerate the proper steps to take when an adverse occurrence happens.
- Recognize the role of the JUA/PCF and the State Board of Medical Examiners in risk management.

Program Outline

I. Introduction - March Seabrook, MD (West Columbia, SC)

II. Overview of JUA and PCF - Sam McEwen, Manager, JUA Claims (Columbia, SC)

III. Controlling Medical Liability - March Seabrook, MD

IV. If You Need A Lawyer - Ashby W. Davis, JD (Greenville, SC), Steven A. Snyder, JD (Greenville, SC)

V. Overview of the State Board of Medical Examiners - J. D. Whitehead, Jr., MD, State Board of Medical Examiners (Columbia, SC)

VI. Hospital Risk Management - Karl Pfaehler, SC Hospital Association (Columbia, SC)

VII. Question and Answer Session

CME Credit

The SCMA designates this continuing medical education activity for up to 3 hours of Category 1 credit toward the Physician's Recognition Award for the American Medical Association. Each physician should claim only those hours of credit he or she actually spent in the educational activity.

The South Carolina Medical Association is accredited by the Accreditation Council for Continuing Medical Education (ACCME) to sponsor continuing medical education for physicians.

MARK YOUR CALENDAR!

The South Carolina Medical Association's Annual Meeting and Scientific Assembly is scheduled for April 23-26, 1998, at the Charleston Place Hotel, Charleston, South Carolina.

SCMA WORKSHOPS

THE $100,000 OFFICE MANAGER
MARCH 12, 1998

Now, more than ever, medical practice managers and physicians are required to look upon their organizations as businesses. As such, they must streamline operations and manage costs in order to become more efficient and effective in an increasingly competitive environment. In this workshop, participants will review essential techniques and tips to manage the medical practice, ensure revenue enhancement, reduce overhead, and curb unnecessary spending. Register by March 2, 1998.

9:00 a.m. - 4:00 p.m.; Registration: 8:30 a.m.
Charleston, Charleston Hilton

EMPLOYMENT AND LABOR LAW ISSUES FOR A MEDICAL OFFICE
MARCH 26, 1998

This seminar, presented by employment law specialists familiar with medical practices, will present a comprehensive overview of the state and federal requirements that impact virtually any employment decision that you make in your practice. From the initial application and interview process to the handling of a termination action, this seminar will present practical, useful information on how you can be sure you are acting properly to minimize the possibility of costly and needless litigation. Register by March 16, 1998.

9:00 a.m. - 4:00 p.m.; Registration: 8:30 a.m.
Columbia, Adam's Mark Hotel

Space in each program is limited, so be sure to register early. If you have any questions, please call Melissa Hamby, extension 253, at 798-6207 in Columbia, or at (800) 327-1021 statewide, or you can contact her by e-mail at melissa@scmanet.org.

QUESTIONS ABOUT COMPUTERS OR COMPUTERIZED PATIENT RECORDS?

SCMA PRACTICE MANAGEMENT SERVICES HAS THE ANSWERS

Thinking about upgrading or purchasing a new computer system? Considering computerized patient records? Need someone who can provide cost-effective, objective advice on what are your best information technology options? SCMA Practice Management Services, Inc., is here to help. We understand computer systems. We know how medical practices operate, and we have experience negotiating with vendors to get physicians the best value. Let us be your independent source for information technology advice. Contact us before you make any information technology decisions. Our advice can save you time and money and help you avoid unnecessary expense.

For more information, contact Stephen Seeling at (803) 798-6207, extension 260 or statewide at (800) 327-1021. You may also send e-mail to stephen@scmanet.org. ❐

PCN UPDATE

Don't forget to notify Physicians Care Network (PCN) of location and/or billing address changes. Please make sure you enroll new physicians in PCN. PCN provider participation continues at an all-time high. There are now 5,598 participating physicians, 563 participating ancillary providers, and 78 participating hospitals.

PRECERTIFICATION PHONE NUMBER CHANGES

The phone number for precertification has changed. Please change your information to reflect the new toll-free number as (800) 447-7055.

Sheila Cooper has joined the PCN staff as Manager of Utilization Review. If you need to contact her, please call (803) 798-6207, extension 262 or (800) 327-1021.

PROVIDER DIRECTORY UPDATE

PCN will be printing new provider directories very soon. Please take a moment to look at the way you are listed and make sure that PCN has all of your locations and phone numbers listed correctly. If you have corrections, please contact Cindy Osborn, Network Coordinator, PCN, at (803) 798-6207, extension 257 or (800) 327-1021.

Venture Packaging in Anderson and Pepsi Cola Bottling Company of Florence have terminated their contracts with PCN effective 1/1/98.

NEW GROUPS:

- Solo Benefit Fund, Statewide; effective 1/1/98; Access/Peer Review.
- Philadelphia American Life, Statewide; effective 1/1/98; Access/Peer Review.
- Ace Textiles, Sumter; effective 11/1/98; Access/Peer Review.
- MITECH Corporation, North Charleston; effective 1/1/98; Access/Peer Review.
- King Group, North Charleston; effective 1/1/98; Access/Peer Review.
- Erhardt & Leimer, Duncan; effective 12/1/97; Access/Peer Review.
- Worsley Companies, Wilmington, NC; effective1/1/98; Access/Peer Review.
- S & S Healthcare, Statewide; effective 1/1/98; Access/Peer Review.
- Sele Corporation, Greenville, Spartanburg; effective 1/1/98; Access/Peer Review

If you have questions about PCN, please contact Cindy Osborn at the number listed above or you can send an e-mail message to cindy@scmanet.org.

MEDICARE UPDATE (continued from page 1)

New CRNA Billing Procedures: Effective January 1, 1998, HCFA payment policy allows for payment of medically directed services when only one anesthesia service was supervised. The payment amount for the physician services and the CRNA service is 50 percent of the allowance otherwise recognized had the service been furnished by the anesthesiologist alone.

The new procedure code modifier (QY) has been created for the physician providing this single medically directed service. This modifier is effective for single medically directed services furnished on or after January 1, 1998. ❒

The Journal OF THE SOUTH CAROLINA MEDICAL ASSOCIATION

VOLUME 94 FEBRUARY 1998 NUMBER 2

ORIGINS OF THE SOUTH CAROLINA MEDICAL ASSOCIATION

CHARLES S. BRYAN, M. D.*

In 1843, Nathan Smith Davis, then a 26-year-old physician in Binghamton, New York, was elected a delegate to the New York State Medical Society. Like many physicians of his time, Davis deplored the prevailing low standards of medical education. What was allegedly a learned profession was in fact open to just about anyone who could endure a perfunctory series of lectures, furnish an office, and hang up a shingle. Davis urged his state medical society to take a stand. When his colleagues declined to act alone, he convinced them to sponsor a meeting in New York City open to representatives from medical societies and medical faculties throughout the United States. This meeting took place in 1846, attended by 119 delegates of whom about half were from New York State. There was sufficient interest in the problems of medical education and medical licensure to justify a second meeting the following year. At the 1847 meeting, attended by 239 delegates representing 22 of the 29 states, it was resolved to create the American Medical Association (AMA).

Davis was the obvious choice as first president of the AMA. For vice-president, the delegates turned to James Moultrie, Jr., a fourth-generation physician from Charleston, South Carolina. Moultrie shared Davis' passion for educational reform. He was a scholarly man; indeed, some thought too scholarly:

> Dr. Moultrie was a clever as well as a learned man but unfortunately he had got befuddled in the mazes of metaphysical study and he used a language which was *sui generis*...Sometimes the simplest thought would be enveloped in a cloud of words, so that it was difficult to unravel its meaning, and his language was obscure from the confusion with which he constructed his sentences, involving clause within clause, until its meaning was inexplicable.[1]

Moultrie also shared Davis's passion for improving medical education. In 1821 and 1822, he had been president of the Medical Society of South Carolina (an organization of Charleston physicians), and in that capacity had been a driving force toward the founding of the Medical College of the State of South Carolina. Although he declined appointment as the first chair of anatomy because he felt the school could not succeed without adequate funding from the Legislature, which had been refused, he had kept up his interest. He held that both students and professors were often poorly-qualified, that the curriculum was inadequate, and that there was not enough clinical material in Charleston. In 1835, Moultrie drafted formal proposals for improvement of medical education in South Carolina. Moultrie would be the obvious choice for first president of the South Carolina Medical Association.

---

*2 Medical Park, Suite 502, Columbia, SC 29203

Monday, February 14, 1848

It is to the lasting credit of Moultrie and such Charleston colleagues as Samuel Henry Dickson, J. P. Jervey, Thomas Y. Simons, and William T. Wragg that they recognized that organized medicine in South Carolina should embrace the whole state, not just the Charleston peninsula. In September 1847, Moultrie offered a resolution to the Medical Society of South Carolina to invite physicians throughout the state to attend an organizing convention in Charleston.[2] Responding to the invitation were 86 physicians of whom 65 percent came from Charleston (Table 1). On Monday, February 14, 1848, the organization-

Table 1
MEMBERS OF THE ORGANIZING CONVENTION OF THE SOUTH CAROLINA MEDICAL ASSOCIATION, 1848

DISTRICT	MEMBERS OF THE CONVENTION
Abbeville	J. B. Barrett, Isaac Branch, Thomas B. Dendy, J. A. Gibert, T. J. Mabry
Barnwell	Amory Coffin
Charleston	R. S. Bailey, S. W. Barker, J. Bellinger, E. S. Bennet, H. Boylston, J. W. Brailsford, D. J. C. Cain, P. M. Cohen, Thomas Curtis, J. L. Dawson, E. H. Deas, H. W. DeSaussure, Edward Elfe, W. M. Fitch, C. Fitzsimmons, E. B. Flagg, H. R. Frost, E. A. Gadsden, P. C. Gaillard, E. Geddings, A. P. Hayne, E. Horlbeck, J. E. Holbrook, Wm. Hume, J. P. Jervey, Jos. Johnson, R. Lebby, Lawrence Lee, A. G. Mackey, W. M. Michel, J. C. McKewn, J. R. Motte, James Moultrie, W. L. Moultrie, T. L. Ogier, Geog. S. Pelzer, St. J. Phillips, F. P. Porcher, E. Y. Porcher, J. B. Powell, J. F. Prioleau, T. G. Prioleau, W. G. Ramsay, Henry Ravenel, F. M. Robertson, B. A. Rodrigues, D. D. Sams, J. W. Schmidt, C. U. Shepard, E. D. Smith, Thos. Y. Simons, E. S. Tennent, B. F. Trapier, A. B. Williman, Henry Winthrop, Saml. Wilson, W. T. Wragg, Joseph Yates
Chesterfield	Alexander Williams
Colleton	H. W. Ford, John May, Edward Mitchell, W. M. Shuler
Edgefield	J. C. Ready, A. W. Youngblood
Fairfield	Thos. T. Robertson
Georgetown	J. E. Easterling
Kershaw	W. J. McKain, R. B. Johnson
Lancaster	W. C. Cauthen, R. E. Wylie
Lexington	Gerhard Muller
Newberry	J. W. McCants
Orangeburg	J. W. Keitt, J. Quattlebum, A. Salley, A. Vogt
Richland	Samuel Fair
Sumter	J. A. Mayes
Union	W. K. Sims
York	J. R. Bratton, W. E. Adams

al meeting began in Charleston as follows:

> In pursuance of a call made upon the Medical profession of South-Carolina, by the Medical Society of South-Carolina, a large number of physicians from all parts of the State, convened at 10 o'clock this morning, in the Hall of the Apprentices' Library Society.
>
> On motion of Dr. W. T. Wragg, of Charleston, the meeting came to order, and Drs. JAMES MOULTRIE of Charleston, was called to the Chair, and Dr. D. J. C. CAIN, of Charleston, and R. B. JOHNSON, of Camden, were appointed Secretaries.
>
> The Committee was constituted as follows:
>
> Dr. W. T. Wragg, of Charleston
> Dr. R. E. Wiley, of Lancaster
> Dr. T. B. Dendy, of Abbeville
> Dr. J. A. Mayes, of Sumter
> Dr. H. W. Ford, of Colleton
> Dr. W. M. Shuler, of Orangeburg
> Dr. A. W. Youngblood, of Edgefield
> Dr. W. K. Sims, of Union
> Dr. S. Fair, of Richland
> Dr. J. R. Bratton, of York
> Dr. R. B. Johnson, of Kershaw
> Dr. Alex. Williams, of Chesterfi'd.

The Committee retired for a few minutes and on their return, nominated the following gentlemen as officers of the Convention, who were thereupon unanimously elected:

> Dr. JAMES MOULTRIE, of Charleston, *President*
> Dr. J. C. READY, of Edgefield—*Vice President*
> Dr. ISAAC BRANCH, of Abbeville—*Vice President*
> Dr. D. J. C. CAIN, of Charleston—*Secretary*
> Dr. R. B. JOHNSON, of Camden—*Secretary*

The Convention was then organized and proceeded to business.

At least three conclusions can be deduced from the minutes of the organizing convention. First, its members made good on their pledge to emulate the principles articulated at the organizing convention of the AMA the previous year, including their adoption of the AMA's Code of Ethics (See Appendix). Second, they made good on their pledge to have a statewide organization including a statewide slate of officers despite the preponderance of Charlestonians among their ranks. Finally, they made good on their pledge to address most of the significant issues of the day. Many, perhaps most of today's South Carolina Medical Association's (SCMA) committees can be traced in part to resolutions proffered at the organizational meeting (Table 2). Let us examine some of these resolutions in more detail.

On the first day, a series of resolutions was passed in rapid succession. The first of these, offered by Dr. W. T. Wragg, recognized the importance of the medical school to the young organization:

> *Resolved*, That the Faculty of the Medical College of the State of South-Carolina, be invited to participate in the deliberations of this Convention.

The second resolution, offered by Dr. T. Y. Simons of Charleston, recognized the importance of establishing a sound basis for vital statistics:

> *Resolved*, That a committee of five be appointed to report on the recommendation of the National Medical Convention, to the Medical Profession, to use their influence to have established in their respective States, a Registration of Births, Marriages, and Deaths.

Table 2
SOME MOTIONS MADE AT THE ORGANIZING CONVENTION AND THEIR COUNTERPARTS 150 YEARS LATER

MOTION MADE IN 1848	COUNTERPART IN 1998*
Invitation to medical school faculty to participate in the convention	Continuing Medical Education Committee; Editorial Board, *The Journal*; SCIMER
Registry of births, marriages, and deaths	DHEC; South Carolina DSS
Standards for premedical education	SCIMER
Discouragement of pharmacists from dispensing patent medicines and nostrums	Legislative Activities Committee
Creation of Constitution and Bylaws	Constitution and Bylaws Committee
Defrayal of expenses for the convention	Board of Trustees
Requirements for membership	Constitution and Bylaws Committee
Separate classification for Thomsonians	Legislative Activities Committee
Creation of Board of Counselors	Board of Trustees
Determination of number of physicians in South Carolina	South Carolina Department of Labor, Licensing and Regulation
Vesting of medical licensing in "separate and distinct bodies"	South Carolina Department of Labor, Licensing and Regulation
Recognition of the Code of Ethics of the AMA	Medical Ethics Committee; Mediation Committee; Physicians' Advocacy and Assistance Committee; Public Relations and Communications Committee; Risk Management Committee
Investigation of indigenous medical botany in South Carolina	SCIMER

*SCIMER= South Carolina Institute for Medical Education and Research; DHEC = Department of Health and Environmental Control; DSS = Department of Social Services

The third resolution, offered by Dr. J. P. Jervey of Charleston, recognized the importance of sound premedical education:

> *Resolved,* That it is both desirable and necessary that all young men who may hereafter apply to be received as Students of Medicine, should have obtained a proper and suitable preparatory education, and that a Committee of five be appointed to report on the standard of requirements proper to be exacted from

such applicants.

Next, a resolution offered by Wragg recognized the importance of discouraging public consumption of patent medicines and various nostrum on the recommendation of druggists:

> *Resolved,* That a Committee of five be appointed for the purpose of reporting on the best means of discouraging Druggists, who are in the habit of vending Patented Medicines and Nostrums.

Wragg also "laid before the Convention, a circular from the College of Pharmacy of New-York, in which a few of the base frauds practised by Foreign Druggists, as well as those of our own country, are exposed." Setting a precedent for referral of items-from-the-floor to appropriate committees, the officers referred this circular to the just-formed Committee on Druggists.

It was at this point in the proceedings that Dr. Elias Horlbeck of Charleston made the necessary resolution to establish the South Carolina Medical Association:

> *Whereas*, The members of the Medical Profession of the State of South-Carolina are assembled on this occasion for the general purpose of advancing the character and usefulness of their calling, as well as for other objects more particularly set forth in the circular of the Medical Society of this City [Charleston]; and whereas it has been ascertained by experience, that the united and concerted action of individuals engaged in similar pursuits, facilitates the accomplishments of their ends—therefore be it
>
> *Resolved*, That in order to the more successful attainment of the objects of which it has been assembled, this Convention do proceed to establish a State Medical Association, and that a committee of five members be nominated to report a Constitution and By Laws for its permanent organization.

The convention adjourned at noon but reassembled by 12:30 P.M. At the afternoon session, reports on the Committee on Preliminary Education, the Committee on the By-Laws of the South-Carolina Medical Association, and the Committee on Druggists were already available. Some highlights of the bylaws were as follows:

- Membership would be "open to every gentleman of the Medical Profession, residing within the state" with certain stipulations.
- Members "shall collectively represent and have cognizance of the common interests of the Medical Profession in every part of the State."
- Participation was encouraged: "any propositions or suggestions which may be thought to be conducive to the general interest of Medical Science, or the welfare of the Association, may be offered by any member; the Association deciding by vote, whether to engage in the consideration of the same."
- The organization would stand for orthodox medicine:

> All *irregular* practitioners are absolutely prohibited. By an irregular practitioner is meant, one who is not a member of this Association, or a graduate of a reputable Medical College; or any Thomsonian, or any regular practitioner that may adopt or advocate the Thomsonian system.

- Likewise the organization would exclude any physician who receives as students into his office, individuals who have failed to furnish evidence that they have the prerequisites enumerated in the proceedings of the South-Carolina Medical Association; or who in any way encourages Druggists who recommend and habitually vend nostrums. . . ; or who does not conform to the universal Code of Ethics; or who violates the Fee Bill as established in the District or neighborhood in which he resides; or who offers to cure any disease by a medicine, the composition of which he keeps a secret, or vend, or advertise the same for sale.

- District Societies would be organized according to a standard plan. Each district society would establish "a Fee-Bill to govern its own members."
- Members could apply for fellowship in the society if they had been in practice for five years and could document "respectable standing in the profession."
- No member still in active practice would be allowed to resign from the association without permission from the Counsellors. However, members at age 60 could, with permission of the Counsellors, be designated *Retired Members* with full privileges but exempt from "assessments and liabilities of office."
- Members could be expelled from the association by two-thirds majority vote on grounds of "notorious and gross immorality; infamous crime under the laws of the land; attempt to destroy this Association; violation of any of its by-laws of which expulsion is the penalty; and false certificates of studies, or character of Students of Medicine."
- A library would be established with each book "stamped by the Librarian with the name and arms of the Society."

It is remarkable that these various reports could be presented after a 30-minute lunch break. Either the members had worked with incredible speed and diligence during the lunch break or—more probably—the documents had been prepared ahead of time!

Tuesday, February 15, 1848

The next day the convention reassembled at 11:00 A.M. and latecomers were welcomed. It was felt that the report of the Committee on Druggists should be viewed as a national issue rather than a local one:

> *Resolved*, That the memorial be adopted, signed by the officers of the Convention, and a copy sent to each House of Congress.

On a motion from Dr. Lawrence Lee of Charleston, it was resolved that the number of physicians in South Carolina be determined:

> *Resolved*, That a Committee of five be appointed to ascertain the number of practitioners in this State, diplomated, licensed and unauthorized, for the American Medical Association.

Dr. J. L. Dawson of Charleston then moved that doctors ought to be more active in politics:

> *Resolved*, That a Committee of three from each District represented in this Convention be appointed by the President, whose duty it shall be to nominate at least one respectable physician from their respective Districts as a candidate for the Legislature at the approaching election.

Objections followed. Dr. R. E. Wylie of Lancaster observed that "the community would regard such a movement with suspicion," and moreover that "few physicians could devote much of their time to canvassing...without detriment to their practice." Dr. Isaac Branch of Abbeville "thought it inexpedient to mingle medicine and politics." Dr. Dawson eventually withdrew his resolution.

The convention then adjourned until 4:00 P.M.; and one can imagine that this allowed the large Charleston contingent time to attend to their daily routines. At the late afternoon session, the members from what was then the "back-country" received the welcome news that it was "customary with the South-Carolina Rail-Road Company to give a free passage on the Rail-Road to such gentlemen as were delegates to scientific or religious Conventions held in Charleston, and that it was probable that each member from the country would be permitted to return free of expense on presenting a certificate to the effect that he was a member of the Convention." It was therefore:

> *Resolved*, That the President be requested to give a certificate to each member from the country that he is a member of this Convention.

Dr. Horlbeck then moved to liberalize the membership requirements for the association:

> *Resolved*, That until the next annual meeting of the Association, the provisions of the By-Laws requiring five years previous practice, as also to the mode of admission by application to the Counsellors, be suspended, and that medical gentlemen who have been prevented from attending this Convention, or who may not have been summoned, be allowed to take their seats as fellows of this Association, upon signing the By-Laws.

Dr. I. Branch of Abbeville offered a resolution praising Drs. Peter Cordes Gaillard and Henry W. DeSaussure of Charleston for fostering scientific medicine:

> *Resolved,* That this Convention appreciate the labors of Drs. P. C. Gaillard and H. W. DeSaussure, as well as those of their predecessors, in conducing the Southern Journal of Medicine and Pharmacy, and that we will, individually, use our utmost efforts in sustaining that Journal.

In this spirit of good will and cooperation, it was resolved to further liberalize the membership requirements:

> *Resolved*, That all persons who were received in their respective communities or neighborhoods as practitioners of medicine, and who have borne a fair and honest character, before the passage of the license law of this State, be allowed the privileges of this Association.

Despite this pervading spirit of inclusiveness, the members of the convention knew only too well that orthodox medicine was threatened by a number of well-organized cults. The most influential of these were the Thomsonians, followers of an itinerant herbalist named Samuel Thomson who held that disease was caused by excess "cold" in the body. Thomson's regimen was designed to neutralize the "cold" by hot baths and herbs. This and similar unifying approaches to disease were threatening to orthodox physicians, who were tending to get away from their traditional regimens of bleeding and purging yet who often had little else to offer. Therefore it was:

> *Resolved*, That any Thomsonian, or any regular physician who may adopt or advocate the Thomsonian system, (if system it can be called,) be included among the irregular practitioners.

The distinction between "regular" and "irregular" practitioners would remain an issue; indeed, it can be argued that it has never been resolved to everyone's satisfaction.

Dr. Horlbeck of Charleston made a motion anticipating the eventual creation of a Board of Trustees whose members are drawn from each district:

> *Resolved*, That until three or more District Societies are formed, the Board of Counsellors of this Association shall consist of one Counsellor for every district represented in this Convention, having less than five members present, and one for every district having more than five, in accordance with the spirit of the By-Laws.

Another resolution suggested the creation of what was later the State Board of Medical Examiners:

> *Resolved*, That in the opinion of this Convention, the duties of instructing and

> licensing candidates for the medical profession should be vested in separate and distinct bodies.

This resolution, however, did not pass. Finally, on a motion from Dr. J. A. Mayes of Sumter, it was:

> *Resolved*, That the Committee on Printing be authorized to incorporate in the By-Laws, the Code of Ethics adopted by the American Medical Association, and that it be recognized by this Association.

Wednesday, February 16, 1848

The minutes of the third day of the convention indicate even greater preoccupation with raising the educational standards of medicine. It was:

> *Resolved*, That notwithstanding the very low standard of preliminary education adopted by the American Medical Association, and concurred in temporarily by this Convention for prudential reasons, yet it is the opinion of this Convention, that the respectability of the profession and the usefulness and chances for eminence of the practitioner would be greatly augmented by a preparatory course of liberal studies.

It would be many years before this desideratum was attained in South Carolina or indeed anywhere else in the United States. After the passing of a resolution to appoint a committee "to investigate the *Indigenous Medical Botany* of this State," Dr. T. B. Dendy of Abbeville offered a thoughtful preamble and resolutions on premedical and medical education, which were adopted:

> How much so ever other causes may tend to embarrass medical reform, we nevertheless regard the failure of Medical Colleges to require a strict conformity even to their present low standard as an impediment worthy of the most serious consideration. And while it affords us much pleasure to know that the Medical College of the State of South Carolina stands among the first, in her preparatory requirements and in the enforcement of them, we feel that more may yet be done to elevate her still higher.
>
> It is apparent to all of us, that the term of lecturing in all our Medical Colleges, is entirely too short to enable the different Professors to do that justice to their subjects which their importance demands, and that it is far too short to enable students profitably to receive the amount of instruction which should be contained in a course of lectures. The door of entrance into Medical Colleges is not sufficiently guarded.
>
> The neglect on the part of first course medical students to attend regularly the lectures is an evil of great magnitude. It is not only an obstacle to the attainment of medical knowledge, but it tends to consequences far worse—the destruction of morals.
>
> The examinations for the degree of M.D. are not generally conducted with sufficient care to secure the ends contemplated by their institution. And as this Convention feels the greatest interest in the prosperity and usefulness of the Medical College of the State of South-Carolina, and as we look to her as the guardian of the Medical profession in this State, and as the institution which is to prepare those to whom are to be entrusted the progress and perpetuity of all reforms in the Medical Profession; therefore:
>
> *Resolved*, That this Convention does earnestly recommend that the Medical College of the State of South-Carolina lengthen her term of lecturing from four to six months; that she may better guard the door of entrance and secure the attendance of first course students by

> examinations; also that she should conduct her examinations for the degree of M.D. more rigidly.
>
> *Resolved*, That should she adopt the above recommendations, we will use our influence in her support.

The convention thanked the trustees of the Apprentices' Library Society for the use of their meeting hall. On a motion of Dr. Wragg of Charleston, it was

> *Resolved*, That the Convention do now resolve itself into the "SOUTH CAROLINA MEDICAL ASSOCIATION," and the officers of the Convention continue to act as officers of the Association, until others be appointed; which was unanimously adopted.

Counsellors from the various districts were elected and the meeting adjourned, to meet again on the third Wednesday of February, 1849.

SUMMARY

Responding primarily to the need to improve standards of medical education and licensing, 86 physicians attended a Medical Convention of South Carolina over a three-day period in February 1848 to form the South Carolina Medical Association. Many of our present activities and concerns can be traced to their resolutions. ❐

REFERENCES

1. Waring JI. A brief history of medicine in South Carolina, 1825-1900 (Columbia, S.C.: South Carolina Medical Association, 1967), 273.
2. Waring JI. A brief history of the South Carolina Medical Association (Charleston, S.C.: South Carolina Medical Association, 1948), 23-27.

APPENDIX. EXCERPTS FROM THE AMA CODE OF ETHICS (1847) ENDORSED BY THE SCMA (1848)

CHAPTER I.

OF THE DUTIES OF PHYSICIANS TO THEIR PATIENTS AND OF THE OBLIGATIONS OF PATIENTS TO THEIR PHYSICIANS.

Art. I.—*Duties of Physicians to their Patients.*

1. A physician should not only be ever ready to obey the calls of the sick, but his mind ought also to be imbued with the greatness of his mission, and the responsibility he habitually incurs in its discharge. Those obligations are the more deep and enduring, because there is not tribunal other than his own conscience, to adjudge penalties for carelessness or neglect. Physicians should, therefore, minister to the sick with due impressions of the importance of their office; reflecting that the ease, the health, and the lives of those committed to their charge, depend on their skill, attention and fidelity. They should study, also, in their deportment, so to unite *tenderness* with *firmness*, and *condescension* with *authority*, as to inspire the minds of their patients with gratitude, respect and confidence.

2. Every case committed to the charge of a physician should be treated with attention, steadiness and humanity. Reasonable indulgence should be granted to the mental imbecility and caprices of the sick. Secrecy and delicacy, when required by peculiar circumstances, should be strictly observed; and the familiar and confidential intercourse to which physicians are admitted in their professional visits, should be used with discretion, and with the most scrupulous regard to fidelity and honor. The obligation of secrecy extends beyond the period of professional services; none of the privacies of personal and domestic life, no infirmity of disposition or flaw of character observed during professional attendance, should ever be divulged by him except when he is imperatively required to do so.

The force and necessity of this obligation are indeed so great, that professional men have, under certain circumstances, been protected in their observance of secrecy, by courts of justice.

3. Frequent visits to the sick are in general requisite, since they enable the physician to arrive at a more perfect knowledge of the disease,—to meet promptly every change which may occur, and also tend to preserve the confidence of the patient. But unnecessary visits are to be avoided, as they give useless anxiety to the patient, tend to diminish the authority of the physician, and render him liable to be suspected of interested motives.

4. A physician should not be forward to make gloomy prognostications, because they savour of empiricism, by magnifying the importance of his services in the treatment or cure of the disease. But he should not fail, on proper occasions, to give to the friends of the patient timely notice of danger, when it really occurs; and even to the patient himself, if absolutely necessary. This office, however, is so peculiarly alarming when executed by him, that it ought to be declined whenever it can be assigned to any other person of sufficient judgment and delicacy. For, the physician should be the minister of hope and comfort to the sick; that, by such cordials to the drooping spirit, he may smooth the bed of death, revive expiring life, and counteract the depressing influence of those maladies which often disturb the tranquility of the most resigned, in their last moments. The life of a sick person can be shortened not only by the acts, but also by the words or the manner of a physician. It is, therefore, a sacred duty to guard himself carefully in this respect, and to avoid all things which have tendency to discourage the patient and to depress his spirits.

5. A physician ought not to abandon a patient because the case is deemed incurable; for his attendance may continue to be highly useful to the patient, and comforting to the relatives around him, even in the last period of a fatal malady, by alleviating pain and other symptoms, and by soothing mental anguish. To decline attendance, under such circumstances, would be sacrificing to fanciful delicacy and mistaken liberality, that moral duty, which is independent of, and far superior to all pecuniary considerations.

6. Consultations should be promoted in difficult or protracted cases, as they give rise to confidence, energy, and more enlarged views in practice.

7. The opportunity which a physician not unfrequently enjoys of promoting and strengthening the good resolutions of his patients, suffering under the consequences of vicious conduct, ought never be neglected. His counsels, or even remonstrances, will give satisfaction, not offence, if they be proffered with politeness, and evince a genuine love of virtue, accompanied by a sincere interest in the welfare of the person to whom they are addressed.

Art. II.—*Obligations of Patients to their Physicians.*

1. The members of the medical profession, upon whom are enjoined the performance of so many important and arduous duties towards the community, and who are required to make so many sacrifices of comfort, ease, and health, for the welfare of those who avail themselves of their services, certainly have a right to expect and require, that their patients should entertain a just sense of the duties which they owe to their medical attendants.

2. The first duty of a patient is, to select as his medical adviser one who has received a regular professional education. In no trade or occupation, do mankind rely on the skill of an untaught artist; and in medicine, confessedly the most difficult and intricate of the sciences, the world ought not to suppose that knowledge is intuitive.

3. Patients should prefer a physician, whose habits of life are regular, and who is not devoted to company, pleasure, or to any pursuit incompatible with his professional obligations. A patient should, also, confide the care of himself and family, as much as

possible, to one physician, for a medical man who has become acquainted with the peculiarities of constitution, habits, and predispositions, of those attends, is more likely to be successful in his treatment, than one who does not possess that knowledge.

A patient who has thus selected his physician, should always apply for advice in what may appear to him trivial cases, for the most fatal results often supervene on the slightest accidents. It is of still more importance that he should apply for assistance in the forming stage of violent diseases; it is to a neglect of this precept that medicine owes much of the uncertainty and imperfection with which it has been reproached.

4. Patients should faithfully and unreservedly communicate to their physician the supposed cause of their disease. This is the more important, as many diseases of a mental origin simulate those depending on external causes, and yet are only to be cured by ministering to the mind diseased. A patient should never be afraid of thus making his physician his friend and advisor; he should always bear in mind that a medical man is under the strongest obligation of secrecy. Even the female sex should never allow feelings of shame or delicacy to prevent their disclosing the seat, symptoms and causes of complaints peculiar to them. However commendable a modest reserve may be in the common occurrences of life, its strict observance in medicine is often attended with the most serious consequences, and a patient may sink under a painful and loathsome disease, which might have been readily prevented had timely intimation been given to the physician.

5. A patient should never weary his physician with a tedious detail of events or matters not appertaining to his disease. Even as relates to his actual symptoms, he will convey much more real information by giving clear answers to interrogatories, than by the most minute account of his own framing. Neither should he obtrude the details of his business nor the history of his family concerns.

6. The obedience of a patient to the prescriptions of his physician should be prompt and implicit. He should never permit his own crude opinions as to their fitness, to influence his attention to them. A failure in one particular may render an otherwise judicious treatment dangerous, and even fatal. This remark is equally applicable to diet, drink, and exercise. As patients become convalescent they are very apt to suppose that the rules prescribed for them may be disregarded, and the consequence but too often, is a relapse. Patients should never allow themselves to be persuaded to take any medicine whatever, that may be recommended to them by the self-constituted doctors and doctresses, who are so frequently met with, and who pretend to possess infallible remedies for the cure of every disease. However simple some of their prescriptions may appear to be, it often happens that they are productive of much mischief, and in all cases they are injurious, by contravening the plan of treatment adopted by the physician.

7. A patient should, if possible, avoid even the *friendly visits of a physician* who is not attending, him—and when he does receive them, he should never converse on the subject of his disease, as an observation may be made, without any intention of interference, which may destroy his confidence in the course he is pursuing, and induce him to neglect the directions prescribed to him. A patient should never send for a consulting physician without the express consent of his own medical attendant. It is of great importance that physicians should act in concert; for, although their modes of treatment may be attended with equal success when employed singly, yet conjointly they are very likely to be productive of disastrous results.

8. When a patient wishes to dismiss his physician, justice and common courtesy require that he should declare his reasons for so doing.

9. Patients should always, when practicable, send for their physician in the morning, before his usual hour of going out; for, by being early aware of the visits he has to pay

during the day, the physician is able to apportion his time in such a manner as to prevent an interference of engagements. Patients should also avoid calling on their medical adviser unnecessarily during the hours devoted to meals or sleep. They should always be in readiness to receive the visits of their physician, as the detention of a few minutes is often of serious inconvenience to him.

10. A patient should, after his recovery, entertain a just and enduring sense of the value of the services rendered him by his physician; for these are of such a character, that no mere pecuniary acknowledgment can repay or cancel them.

CHAPTER II.

OF THE DUTIES OF PHYSICIANS TO EACH OTHER, AND TO THE PROFESSION AT LARGE.

Art. I.—*Duties for the support of professional character.*

1. Every individual, on entering the profession, as he becomes thereby entitled to all its privileges and immunities, incurs an obligation to exert his best abilities to maintain its dignity and honour, to exalt its standing, and to extend the bounds of its usefulness. He should therefore observe strictly, such laws as are instituted for the government of its members—should avoid all contumelious and sarcastic remarks relative to the faculty, as a body; and while, by unwearied diligence, he resorts to every honorable means of enriching the science, he should entertain a due respect for his seniors, who have, by their labours, brought it to the elevated condition in which he finds it.

2. There is no profession, from the members of which greater purity of character, and a higher standard of moral excellence are required, than the medical; and to attain such eminence, is a duty every physician owes alike to his profession, and to his patients. It is due to the latter, as without it he cannot command their respect and confidence, and to both, because no scientific attainments can compensate for the want of correct moral principles. It is also incumbent upon the faculty to be temperate in all things for the practice of physic requires the unremitting exercise of a clear and vigorous understanding; and, on emergencies for which no professional man should be unprepared, a steady hand, an acute eye, and an unclouded head may be essential to the well-being, and even to the life, of a fellow creature.

3. It is derogatory to the dignity of the profession, to resort to public advertisements or private cards or handbills, inviting the attention of individuals affected with particular diseases—publicly offering advice and medicine to the poor gratis, or promising radical cures; or to publish cases and operations in the daily prints or suffer such publications to be made;—to invite laymen to be present at operations,—to boast of cures and remedies,—to adduce certificates of skill and success, or to perform any other similar acts. These are the ordinary practices of empirics, and are highly reprehensible in a regular physician.

4. Equally derogatory to professional character is it, for a physician to hold a patent for any surgical instrument, or medicine; or to dispense a secret nostrum, whether it be the composition or exclusive property of himself, or of others. For, if such nostrum be of real efficacy, any concealment regarding it is inconsistent with beneficence and professional liberality; and, if mystery alone give it value and importance, such craft implies either disgraceful ignorance, or fraudulent avarice. It is also reprehensible for physicians to give certificates attesting the efficacy of patent or secret medicines, or in any way to promote these of them.

Art. II.—*Professional services of physicians to each other.*

1. All practitioners of medicine, their wives, and their children, while under the

paternal care, are entitled to the gratuitous services of any one or more of the faculty residing near them, whose assistance may be desired. A physician afflicted with disease is usually an incompetent judge of his own case; and the natural anxiety and solicitude which he experiences at the sickness of a wife, a child, or any one who by the ties of consanguinity is rendered peculiarly dear to him, tend to obscure his judgment, and produce timidity and irresolution in his practice. Under such circumstances, medical men are peculiarly dependent upon each other, and kind offices and professional aid should always be cheerfully and gratuitously afforded. Visits ought not, however, to be obtruded officiously; as such unasked civility may give rise to embarrassment, or interfere with that choice, on which confidence depends. But, if a distant member of the faculty, whose circumstances are affluent, request attendance, and an honorarium be offered, it should not be decline; for no pecuniary obligation ought to be imposed, which the party receiving it would wish not to incur.

Art. III.—*Of the duties of physicians as respects vicarious offices.*

1. The affairs of life, the pursuit of health, and the various accidents and contingencies to which a medical man is peculiarly exposed, sometimes require him temporarily to withdraw from his duties to his patients, and to request some of his professional brethren to officiate for him. Compliance with this request is an act of courtesy, which should always be performed with the utmost consideration for the interest and character of the family physician, and when exercised for a short period, all the pecuniary obligations for such service should be awarded to him. But if a member of the profession neglect his business in quest of pleasure and amusement, he cannot be considered as entitled to the advantages of the frequent and long continued exercise of this fraternal courtesy, without awarding to the physician who officiates the fees arising from the discharge of his professional duties.

In obstetrical and important surgical cases, which give rise to unusual fatigue, anxiety and responsibility it is just that the fees accruing therefrom should be awarded to the physician who officiates.

Art. IV.—*Of the duties of physicians in regard to Consultations.*

1. A regular medical education furnishes the only presumptive evidence of professional abilities and acquirements, and ought to be the only acknowledged right of an individual to the exercise and honours of his profession. Nevertheless, as in consultations the good of the patient is the sole object in view, and this is often dependent on personal confidence, no intelligent regular practitioner, who has a license to practice from some medical board of known and acknowledged respectability, recognized by this association, and who is in good moral professional standing in the place in which he resides, should be fastidiously excluded from fellowship, or his aid refused in consultation when it is requested by the patient. But no one can be considered as a regular practitioner, or a fit associate in consultation, whose practice is based on an exclusive dogma, to the rejection of the accumulated experience of the profession, and of the aids actually furnished by anatomy, physiology, pathology, and organic chemistry.
2. In consultations no rivalship or jealousy should be indulged; candour, probity, and all due respect should be exercised towards the physician having charge of the case.
3. In consultations the attending physician should be the first to propose the necessary questions to the sick; after which the consulting physician should have the opportunity to make such farther inquiries of the patient as may be necessary to satisfy him of the true character of the case. Both physicians should then retire to a private place for deliberation; and the one first in attendance should communicate the directions agreed upon to the

patient or his friends, as well as any opinions which it may be thought proper to express. But no statement or discussion of it should take place before the patient or his friends, except in the presence of all the faculty attending, and by their common consent; and no *opinion*s or *prognostications* should be delivered, which are not the result of previous deliberation and concurrence.

4. In consultations, the physician in attendance should deliver his opinion first; and when there are several consulting, they should deliver their opinion in the order in which they have been called in. No decision, however, should restrain the attending physician from making such variations in the mode of treatments, as any subsequent unexpected change in the character of the case may demand. But such variation and the reasons for it ought to be carefully detailed at the next meeting in consultation. The same privilege belongs also to the consulting physician if he is sent for an emergency, when the regular attendant is out of the way, and similar explanation must be made by him, at the next consultation.

5. The utmost punctuality should be observed in the visits of physicians when they are to hold consultation together, and this is generally practicable, for society has been considerate enough to allow the plea of a professional engagement to take precedence of all others, and to be an ample reason for the relinquishment of any present occupation. But as professional engagements may sometimes interfere, and delay one of the parties, the physician who first arrives should wait for his associate a reasonable period, after which the consultation should be considered as postponed to a new appointment. If it be the attending physician who is present, he will of course see the patient and prescribe; but if it be the consulting one, he should retire, except in case of emergency, or when he has been called from a considerable distance, in which latter case he may examine the patient, and give his opinion in *writing* and *under seal*, to be delivered to his associate.

6. In consultation, theoretical discussions should be avoided, as occasioning perplexity and loss of time. For there may be much diversity of opinion concerning speculative points, with perfect agreement in those modes of practice which are founded, not on hypothesis, but on experience and observation.

7. All discussions in consultation should be held as secret and confidential. Neither by words nor manner should any of the parties to a consultation assert or insinuate, that any part of the treatment pursued did not receive his assent. the responsibility must be equally divided between the medical attendants; they must equally share the credit of success as well as the blame of failure.

8. Should an irreconcilable diversity of opinion occur when several physicians are called upon to consult together, the opinion of the majority should be considered as decisive; but if the numbers be equal on each side, then the decision should rest with the attending physician. It may, moreover, sometimes happen, that two physicians cannot agree in their views of the nature of a case, and the treatment to be pursued. This is a circumstance much to be deplored, and should always be avoided, if possible, by mutual concessions, as far as they can justified by a conscientious regard for the dictates of judgment. But in the event of its occurrence, a third physician should, if practicable, be called to act as umpire, and if circumstances prevent the adoption of this course, it must be left to the patient to select the physician in whom he is most willing to confide. But as every physician relies upon the rectitude of his judgment, he should, when left in the minority, politely and consistently retire from any further deliberation in the consultation, or participation in the management of the case.

9. As circumstances sometimes occur to render a *special consultation* desirable, when the continued attendance of two physicians might be objectionable to the patient, the member of the faculty whose assistance is required in such cases, should sedulously guard against all future unsolicited atten-

dance. As such consultations require an extraordinary portion both of time and attention, at least a double honorarium may be reasonably expected.

10. A physician who is called upon to consult, should observe the most honorable and scrupulous regard for the character and standing of the practitioner in attendance: the practice of the latter, if necessary, should be justified as far as it can be, consistently with a conscientious regard for truth, and no hint or insinuation should be thrown out, which could impair the confidence reposed in him, or affect his reputation. The consulting physician should also carefully refrain from any of those extraordinary attentions or assiduities, which are too often practiced by the dishonest for the base purpose of gaining applause, or ingratiating themselves into the favour of families and individuals.

Art. V.—*Duties of physicians in cases of interference.*

1. Medicine is a liberal profession, and those admitted into its ranks should found their expectations of practice upon the extent of their qualifications, not on intrigue or artifice.

2. A physician, in his intercourse with a patient under the care of another practitioner, should observe the strictest caution and reserve. No meddling inquiries should be made; no disingenuous hints given relative to the nature and treatment of his disorder; nor any course of conduct pursued that may directly or indirectly tend to diminish the trust reposed in the physician employed.

3. The same circumspection and reserve should be observed, when, from motives of business or friendship, and physician is prompted to visit an individual who is under the direction of another practitioner. Indeed, such visits should be avoided, except under peculiar circumstances, and when they are made, no particular inquiries should be instituted relative to the nature of the disease, or the remedies employed, but the topics of conversation should be as foreign to the case as circumstances will admit.

4. A physician ought not to take charge of, or prescribe for a patient who has recently been under the care of another member of the faculty in the same illness, except in cases of sudden emergency, or in consultation with the physician previously in attendance, or when the latter has relinquished the case or been regularly notified that his services are no longer desired. Under such circumstances no unjust and illiberal insinuations should be thrown out in relation to the conduct or practice previously pursued, which should be justified as far as candour, and regard for truth and probity will permit; for it often happens, that patients become dissatisfied when they do not experience immediate relief, and, as many diseases are naturally protracted, the want of success, in the first stage of treatment, affords no evidence of a lack of professional knowledge and skill.

5. When a physician is called to an urgent case, because the family attendant is not at hand, he ought, unless his assistance in consultation be desired, to resign the care of the patient to the latter immediately on his arrival.

6. It often happens, in cases of sudden illness, or of recent accidents and injuries, owing to the alarm and anxiety of friends, that a number of physicians are simultaneously sent for. Under these circumstances courtesy should assign the patient to the first who arrives, who should select from those present, any additional assistance that he may deem necessary, In all such cases, however, the practitioner who officiates, should request the family physician, if there be one, to be called, and, unless his further attendance be requested, should resign the case to the latter on his arrival.

7. When a physician is called to the patient of another practitioner, in consequence of the sickness or absence of the latter, he ought, on the return or recovery of the regular attendant, and with the consent of the patient, to surrender the case.

8. A physician, when visiting a sick person in the country, may be desired to see a neighbouring patient who is under the regular direction of another physician, in consequence of some sudden change or aggravation of symptoms. The conduct to be pursued on such an occasion is to give advice adapted to present circumstances; to interfere no farther than is absolutely necessary with the general plan of treatment; to assume no future direction, unless it be expressly desired; and , in this last case, to request an immediate consultation with the practitioner previously employed.

9. A wealthy physician should not give advice gratis to the affluent; because his doing so is an injury to his professional brethren. The office of a physician can never be supported as an exclusively beneficent one; and it is defrauding, in some degree, the common funds for its support, when fees are dispensed with, which might justly be claimed.

10. When a physician who has been engaged to attend a case of midwifery is absent, and another is sent for, if delivery is accomplished during the attendance of the latter, he is entitled to the fee, but should resign the patient to the practitioner first engaged.

Art. VI.—*Of differences between Physicians.*

1. Diversity of opinion, and opposition of interest, may, in the medical, as in other professions, sometimes occasion controversy and even contention. Whenever such cases unfortunately occur, and cannot be immediately terminated, they should be referred to the arbitration of a sufficient number of physicians, or a *court-medical.*

As peculiar reserve must be maintained by physicians towards the public, in regard to professional matters, and as there exist numerous points in medical ethics and etiquette through which the feelings of medical men may be painfully assailed in their intercourse with each other, and which cannot be understood or appreciated by general society, neither the subject matter of such differences nor the adjudication of the arbitrators would be made public, as publicity in a case of this nature may be personally injurious to the individuals concerned, and can hardly fail to bring discredit on the faculty.

Art. VII.—*Of Pecuniary Acknowledgments.*

1. Some general rules should be adopted by the faculty, in every town or district, relative to pecuniary acknowledgments from their patients; and it should be deemed a point of honour to adhere to these rules with as much uniformity as varying circumstances will admit.

CHAPTER III.

OF THE DUTIES OF THE PROFESSION TO THE PUBLIC, AND OF THE OBLIGATIONS OF THE PUBLIC TO THE PROFESSION.

Art. I.—*Duties of the profession to the public.*

1. As good citizens, it is the duty of physicians to be ever vigilant for the welfare of the community, and to bear their part in sustaining its institutions and burdens they should also be ever ready to give counsel to the public in relation to matters especially appertaining to their profession, as on subjects of medical police, public hygiene, and legal medicine. It is their province to enlighten the public in regard to quarantine regulations; the location, arrangement, and dietaries of hospitals, asylums, schools, prisons, and similar institutions,—in relation to the medical police of towns, as drainage, ventilation, &c.—and in regard to measures for the prevention of epidemic and contagious diseases; and when pestilence prevails, it is their duty to face the danger, and to continue their labours for the alleviation of the suffering, even at the jeopardy of their own lives.

2. Medical men should also be always

ready, when called on by the legally constituted authorities, to enlighten coroner's inquests and courts of justice, on subjects strictly medical,—such as involve questions relating to sanity, Legitimacy, murder by poisons or other violent means, and in regard to the various other subjects embraced in the science of Medical Jurisprudence. But in these cases, and especially where they are required to make a post-mortem examination, it is just, in consequence of the time, labour and skill required, and the responsibility and risk they incur, that the public should award them a proper honorarium.

3. There is no profession, by the members of which, eleemosynary services are more liberally dispensed, than the medical, but justice requires that some limits should be placed to the performances of such good offices. Poverty, professional brotherhood, and certain public duties referred to in section 1 of this chapter, should always be recognized as presenting valid claims for gratuitous services; but neither institutions endowed by the public or by rich individuals, societies for mutual benefit, for the insurance of lives or for analogous purposes, nor any profession or occupation, can be admitted to possess such privilege. Nor can it be justly expected of physicians to furnish certificates of inability to serve on juries, to perform militia duty, or to testify to the state of health of persons wishing to insure their lives, obtain pensions, or the like, without a pecuniary acknowledgement. But to individuals in indigent circumstances, such professional services should always be cheerfully and freely accorded.

4. It is the duty of physicians, who are frequent witnesses of the enormities committed by quackery, and the injury to health and even destruction of life caused by the use of quack medicines, to enlighten the public on these subjects, to expose the injuries sustained by the unwary from the devices and pretensions of the artful empirics and impostors. Physicians ought to use all the influence which they may possess, as professors in Colleges of Pharmacy, and by exercising their option in regard to the shops to which their prescriptions shall be sent, to discourage druggists and apothecaries from vending quack or secret medicines, or from being in any way engaged in their manufacture and sale.

Art. II.—*Obligations of the public to physicians.*

1. The benefits accruing to the public directly and indirectly from the active and unwearied beneficence of the profession, are so numerous and important, that physicians are justly entitled to the utmost consideration and respect from the community. The public ought likewise to entertain a just appreciation of medical qualifications;—to make a proper discrimination between true science and the assumptions of ignorance and empiricism,—to afford every encouragement and facility for the acquisition of medical education,—and no longer to allow the statute books to exhibit the anomaly of exacting knowledge from physicians, under liability to heavy penalties, and of making them obnoxious to punishment for resorting to the only means of obtaining it. ❐

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OPTIMIZING THE CONSENT PROCESS FOR ORGAN DONATION

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BARTOLO M. BARONE, M. Sc., M. D., F. A. C. S.

Organ transplantation today is critically limited by the lack of available organs. The number of patients on the transplant waiting list has more than doubled since 1991 in the United States, an increase from 18,000 to approximately 56,000.[1] This large growth in the number of patients on the national waiting list has raised serious concern regarding the lack of available organ donors currently available today. Despite the fact that public opinion polls have shown that the majority of people (85 to 90 percent) are in favor of organ donation and are willing to donate their own organs (48 to 73 percent) or give consent for the donation of their loved ones' organs (49 to 93 percent), the number of actual organ donors has remained stagnant and has not significantly increased in the past five years.[2]

The Association of Organ Procurement Organizations reported that organ procurement organizations (OPOs) actually recover organs from only 33 percent to 40 percent from the potential donor pool.[3] Accordingly, the Partnership for Organ Donation reported that only 33 percent of potential donors actually become donors, 36 percent of families deny consent for donation, and 27 percent of donors are not identified or their families are not asked (four percent are listed as other).[4] Of those potential donors identified as medically suitable, refusal of the next of kin to consent to donation represents the most significant factor restricting the donation of organs and is the major leading factor in the tragic shortage of organs available for transplantation. If public opinion is so highly in favor of organ donation, why is it that approximately 50 percent of all identified potential organ donors in the United States and in South Carolina are eliminated from the donor pool each year because the donor's next of kin refuses consent for donation?

ORGAN DONATION—A PROCESS

Organ Donation can be viewed as a process, with several key steps. The first step is identifying that a patient has the potential of becoming a donor when brain death is imminent. Next, the families of such patients should receive in-depth information and ongoing teaching from the healthcare team regarding the mechanism of brain death and the likely dismal outcome of their family member's hospitalization. When the medical staff suspects that brain death is imminent, a referral of such patients should be made to the appropriate Organ Procurement Organization (OPO). The final phase in this process is the request and consent for donation.

It is a common goal for OPOs to increase the identification of all potential donor candidates and receive the referral in all cases. Additionally, OPOs continually attempt to seek ways to improve family consent rates and ensure that all families of potential donor candidates are offered the opportunity to consider organ donation. In South Carolina, the identification and referral of potential donors has increased approximately 60 percent over the past three years, and death record reviews in major hospitals in South Carolina have shown that the majority of potential donors in the state are identified. However, consent rates remain between 45 to 50 percent overall.

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There have been several studies that have investigated the consent rate as it relates to the requestor role. Two such studies suggest that the consent rate of donation can be improved. The Kentucky Organ Donor Affiliates 1991 study reported that consent rates increased from 18 percent to 60 percent if there was a separation of time between the pronouncement of death and the family approach of organ donation. This concept is referred to as "decoupling" the approach.[5] Life Gift Organ Donation Center in Houston, Texas reported that the professional role of the requestor was found to have the most significant influence on consent rate. Their study showed that percentage of consents obtained was 67 percent when the OPO coordinator approached the family alone, nine percent when the hospital staff approached the family alone, and 75 percent when a team approach was made jointly by hospital and OPO staff.[6]

Several factors have been noted to negatively affect an individual's willingness to give consent for organ donation. These include religious beliefs, fear of the health care system, lack of understanding regarding the process, timing of the request, and comfort level of the individual making the request. It would seem reasonable that the best individual to make the request for organ donation would be one who is knowledgeable about all aspects of organ donation and has a full understanding of the entire donation and transplantation procedure. This individual would ideally be someone highly skilled and trained in offering the option of organ donation in a knowledgeable but sensitive manner to a family. Most importantly, along with a clear understanding of the process, the requestors comfort level in talking directly to bereaved family members of potential organ donors about the potential for donation is a critical factor in the outcome of the request. Family members can pick up on the comfort level of a requestor. When requestors are not comfortable talking to donor families, the family's willingness to donate is negatively affected.[7] The results of this review indicate that there are specific steps that can be taken to dismiss obstacles and lead to a positive outcome in the family's consent rate for donation. The process of consent for organ donation should be incorporated into hospital policy to insure that, in every individual case, families are offered the option in a consistent and well informed approach. This type of quality approach should include these necessary elements: understanding of brain death, decoupling the approach, and a sensitive, informative discussion about donation by an individual that is knowledge of the donation and transplantation process.

MATERIALS AND METHODS

The South Carolina Organ Procurement Agency, Inc. performed a retrospective review of all medically suitable organ donor referrals over a one (1) year period (10/1/95 to 9/30/96) to determine key factors in the request process that influenced the consent rate. A total of 177 cases were reviewed. Data collected focused on the consent process including the professional role of the person making the initial approach and the involvement of the OPO in the requesting process. Other factors reviewed were "decoupling" the approach, the physical setting of the approach and race of the potential donor.

RESULTS

Of the 177 organ donor referral cases in which a request for organ donation was made, consent was obtained in 86 cases for an overall consent rate of 49 percent. The professional role of the initial requestor and involvement of the OPO was found to have the most significant influence on consent rate. "Decoupling" the approach for donation from the discussion about brain death also had a significant affect on the outcome of the request. The second most significant influence on the consent rate was the race of the potential donor.

Of the 177 cases reviewed, the OPO coordinator made the initial request in 55 cases (31 percent), a hospital staff member in 45 cases (25 percent), and the OPO coordinator and a

Table 1
Consent by Requestor

Requestor	# of Requests	Consents obtained	Consent rate
OPO Coordinator	55	26	47%
Hospital staff	45	2	4%
Joint	77	58	75%
TOTAL	177	86	49%

Table 2
Organ Donor Referrals and Consent by Race

	Referrals	% of total referrals	Consent Rate
African American	69	39%	15%
Caucasian	106	60%	71%
Other	2	1%	50%
TOTAL	177	100%	49%

hospital staff member (joint approach) in 77 cases (44 percent). Hospital staff members included physicians, residents, nurses, and chaplains. The OPO coordinator consent rate was 47 percent, the hospital staff member rate was four percent and the rate for the joint approach was 75 percent. (Table 1) When the request for organ donation was decoupled from the discussion held with the family regarding brain death, consent for donation was obtained 63 percent of the time (83 of 132 requests). Conversely, when the request for organ donation was made at the same time that the discussion regarding brain death was held with the family, consent for donation was only obtained only seven percent of the time (three of 45 requests). All but 12 of the requests were held in a private location. It is interesting to note that in those cases where the approach to the family was held either in a public place or at the bedside, consent for donation was denied in all 12 cases.

When comparing the consent rate of the OPO coordinator with that of the hospital staff member, there is a significant increase in the consent rate (47 percent vs. four percent). Additionally, there is a significant increase from both the OPO coordinator and hospital staff approach alone with the joint approach for consent (75 percent).

The role of the requestor on consent rate is further evidenced by analyzing the race of the potential organ donor referral. Caucasians comprised the majority of organ donor referrals (60 percent), followed by African Americans (39 percent) and other (one percent) (Table 2).

The overall consent rate for African Americans in South Carolina was extremely lower (15 percent) than the consent rate for Caucasians (71 percent). Nationally, the overall consent rate for donation in the African American population is approximately 12 percent. The most in-depth look at the reasons for lower African American donation rates has been done at the Howard University

Table 3
Consent by Requestor and Organ Donor Referral by Race

		OPO coordinator	
Donor race	**Requests**	**Consents obtained**	**Consent rate**
African American	29	6	21%
Caucasian	24	19	79%
Other	2	1	50%

		Hospital staff	
Donor race	**Requests**	**Consents obtained**	**Consent rate**
African American	26	0	0%
Caucasian	19	2	11%
Other	0	0	—

		Joint Approach	
Donor race	**Requests**	**Consents obtained**	**Consent rate**
African American	14	4	29%
Caucasian	63	54	86%
Other	0	0	—

Hospital Transplant Center in Washington, D. C.[8] This study revealed the following seven reasons influencing the reluctance of blacks to donate organs: lack of awareness of transplantation, religious beliefs or superstitions, distrust of the medical community, racism, poor access to medical care, lack of appropriate ethnic sensitivity in the consent process, and intra-family relationships. Of the African American families in South Carolina that were offered the option of donation, the OPO coordinator achieved a higher consent rate than the hospital staff member who made the request alone. Again, the joint approach of the OPO coordinator and the hospital staff member involvement in the request had higher consent rates than either the OPO coordinator or the hospital staff member alone (Table 3).

DISCUSSION

The failure to obtain consent for organ donation in over 50 percent of referrals is a vexing problem given the fact that public awareness for organ donation has been well-established. We believe that solving this problem is a major element in solving the organ donor shortage. There is little debate in the procurement community about the needs of families in donation, or about the importance of a consistent and high-quality donation process. However, data from the Partnership for Organ Donation shows that fewer than one in five potential donor families receive a process that has the basic elements of quality—a clear understanding of brain death, "decoupling", and a sensitive, informative discussion about organ donation.[9] These are factors that can be modified to improve consent for donation.

Assisting hospitals in order to do a better job in potential donor situations, is the ultimate goal of the OPO. Formulation of protocols for the identification and early referral of potential organ donors is the first step in a successful process. Formalizing and organizing a consistent and sensitive consent process is the final step that must be achieved.

Steps to a positive outcome. Seeking a positive outcome in consent for organ donation is a process that should begin as soon as the patient is identified as a potential donor. This is not to imply that families of potential organ donors should be asked about organ donation too early in the process by the healthcare team. The healthcare team can facilitate the outcome of the eventual consent discussion by constantly assessing the family's needs and providing honest, understandable explanations about their loved ones status, tests results and prognosis. Too often we have heard of skilled OPO staff responding to a potential donor call only to find the consent process is already broken beyond repair because someone approached the family about the possibility of organ donation too early in the process or before the family had a clear understanding of the prognosis of their loved one. We believe that it is time to formalize the hospital protocol to safeguard the quality of the donation process from the moment the family arrives until they eventually leave the hospital. Only hospital staff can provide this care to the family. In formulating such a protocol, we believe that the following are essential elements that healthcare team should follow when considering a patient as a potential donor candidate. Ideally, the approach to the family is an ongoing process with the participation of the entire healthcare team.

Physicians. The physician will identify the patient as a potential donor and make the referral to the organ procurement organization as soon as brain death is suspected. Families of all potential donors should be given a clear, concise explanation of brain death. The physician should communicate openly and honestly with the family about the patient's terminal status and explain brain death such that families understand that death has occurred. Brain death is a difficult concept, and even many healthcare professionals understand it poorly. Lack of conceptual clarity by the family about what constitutes death is a major contributor to the problem of the organ shortage. The manner in which families are informed about the brain death diagnosis is often non-uniform and ambiguous. As a result, families often do not understand that death has occurred.

Nurses. Nurses involved in the patient's care can reinforce the physician's discussion by spending time with family members and answering questions they may have regarding the patient's condition. Information regarding the patient's condition and progress should be discussed with the family on a continual basis in a sensitive and consistent manner. It is imperative that families have an understanding that their loved one is dead prior to any discussions regarding organ donation. Above all else, the communication between all members of the health care team and the family need to be unwavering and consistent.

Decoupling. Next, families need some amount of time between being informed about the death of their loved one and the discussion about organ donation—"decoupling." More often than not, hospital personnel tend to jump into the donation conversation before families have had an opportunity to comprehend that their loved one is dead. It is clearly the inappropriate time to discuss organ donation at the same time the family is informed that their loved one is dead. Families need some amount of time to begin to absorb the loss prior to the discussion about organ donation.

Organ Recovery Personnel. When the organ procurement coordinator arrives at the hospital, the patient's record and medical status should be reviewed prior to any discussion regarding organ donation. Gathering information on a specific patient is essential in giving a family detailed information pertinent to their loved one's potential donation.

This is the main reason that a referral should be made early to the OPO; as soon as brain death is suspected. Dealing with specifics rather than generalities gives the family a clearer picture of the decision that is placed before them. We would suggest that key members of the potential donor's health care team spend a brief amount of time discussing the families needs, what they have been told, their reaction, family dynamics and timing for the approach.

Family Issues. Requesting organ donation with a yes or no question or seeking an immediate response puts unnecessary pressure on a family. Simply asking the question does not afford the family appropriate information to make their decision, and consequently, most families will give a negative response. Families should be given informed, detailed information regarding all options of their particular situation in order to make an adequate decision regarding donation. The option of organ donation should be discussed with the family only by someone who can answer all of their questions about the process. The individuals who have proven the most likely to obtain consent for donation are those who feel a strong personal commitment to offering this option and are knowledgeable about and equipped with accurate information that the family needs in order to make their decision. Any fears and myths must be recognized, discussed openly, and alleviated in order to reach a positive outcome. This type of discussion with the family can take a substantial amount of time, but it is time well spent if the family feels that they have been given ample information to make an informed decision. An informative and compassionate approach in offering the option of donation is, by its nature, very beneficial. The family may decline that option, but if they have been adequately informed, honestly apprised of their loved one's condition, and given the opportunity to make choices based upon their own and their loved one's wishes and values, then they have been afforded an excellent level of care.

CONCLUSION

From the data, the ideal approach to a potential donor's family is an ongoing process with the participation of the entire health care team. Though the donor family's predisposition to organ donation is a factor in obtaining consent to organ donation, the role of the requestor and the approach process can have a positive or negative effect on the outcome of the donation. It is clear that involving the OPO staff directly in approaching families significantly increases the chance of a positive outcome. Overall, OPO coordinators attained higher consent rates than hospital staff members; however, a joint approach offered to the family by the OPO and the hospital staff leads to the greatest success in obtaining consent for organ donation. We believe that by implementing these suggestions, every donation request can be approached with consistency and quality. This will require strong collaboration between all members of the hospital and OPO staff in meeting a families' needs. The end result not only affords the donor family something positive in an otherwise tragic situation, but it also will offer more life-saving or life enhancing organs for those individuals who are awaiting organ transplantation. ❒

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Editorials

RAISING ORGANS FOR TRANSPLANTATION

One of the most intractable problems in the health care field is the persistently low rate of organ donations by medically suitable organ donors. In recent years, we have seen spectacular advances in technical aspects of transplant operations, as well as in pharmacological management of the rejection/infection tightrope. As a result, the number of successful solid organ transplantations each year is now over 20,000 and the waiting list for organs is over 50,000. The dark side of this story is that this year, more than 4,000 people are expected to die because of unavailability of a life-saving organ. Only about a third medically suitable organs are donated. If all suitable organs were donated, death on the waiting list would virtually disappear.

The South Carolina Medical Association Medical Ethics Committee has had a continuing interest in problems related to transplantation for some time. In June 1991, it produced a special issue of *The Journal* devoted to transplantation. Recently, the Committee requested the South Carolina Organ Procurement Agency (SCOPA) produce data that would help the SCMA educate its members in ways to improve organ donation rates. In response to that request, SCOPA's Nancy Kay and Bart Barone have looked critically at the process of requesting donation as it is done in South Carolina. In their paper, *Optimizing the Consent Process for Organ Donation* in this issue of *The Journal*, they have identified an important problem with the process, and have offered a potential solution.

Who makes the request appears to be a critical determinant of success in obtaining consent for donation. The authors retrospectively correlated consent rates with the professional role of the requestor. When a hospital staff member, most often a physician or a nurse, made the request alone, the consent rate was four percent. When a transplant coordinator from SCOPA made the request, the success rate was substantially higher—49 percent. The greatest success rate, however, was achieved when the request was made jointly—75 percent.

If true, these data provide a very strong argument for a team approach when donation is requested. Unfortunately, the study was flawed in an important respect: it was neither prospective nor randomized, so it seems quite possible that there was substantial selection bias among the groups. For example, when hospital staff alone made the request, they may not have contacted SCOPA because of a low level of commitment to organ transplantation, which in turn might have led to an unenthusiastic, casual request. There is no good way to measure potential biases of this sort. The authors did no statistical analysis of their data, but this may be reasonable because their numbers were small and the study was uncontrolled, so statistics might have been more misleading than helpful. Statistics aside, however, the strong trend they observed is persuasive. Their study deserves to be repeated on a large scale nationally. The observations they have made could have important implications for donation rates everywhere.

The authors noted a substantially lower rate of consent to donation among African Americans—15 percent compared with 71 percent for Caucasians. This observation is consistent with national data. Clive Callender, an African-American transplant surgeon, has been studying the problem of minority organ donation for over 15 years. His group has shown that educational programs in the African-American community have resulted in sharp increases both in the rate of executing advanced directives committing to organ donation and in actual donation rates. In their studies, an important factor in raising donation rates is using African-American staff to make the request. This seems to help considerably in allaying distrust of the health care system and of transplantation; such distrust is wide-spread in the African-American community. Perhaps the low donor rate in South Carolina could be improved if more use was made of African-American requesters.

Although Kay and Barone's study was not scientifically rigorous, the data are persuasive enough to recommend that hospitals modify their transplantation policies to reflect a few key points:

- SCOPA should be notified when there is suspicion of brain death.
- The physician, with the consistent support of the nursing staff, should honestly and clearly explain permanent absence of brain function to the family while diagnostic documentation is being carried out.
- After the family has been informed that death has occurred, donation should not be discussed until sufficient time has passed for the fact of death to be comprehended by the family. This uncoupling of determination of death and request of donation seems to be critically important.
- The request for donation should be carried out jointly by the clinical care-givers and SCOPA coordinators. SCOPA personnel should be introduced to the family by those whom they know and trust. Nurses and physicians seldom have the time to fully explain the many ramifications of donation, an explanation that often takes several hours. SCOPA personnel have the time to do this well, and are extremely knowledgeable about the details of the donation process. They can be both reassuring and educational to the family.

Carried out in a sensitive, compassionate way, the request process can avoid being coercive and at the same time, result in a family truly informed about the facts and rewards of organ donation.

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THE DUTIES OF PATIENTS: A DISTANT MIRROR

The patient, who believes in a kind and all-merciful Providence, and possesses an unshakable fortitude and strong vital energy and who is laid up with a curable form of disease, and is not greedy, and who further commands all the necessary articles at his disposal, and firmly adheres to the advice of his physician, is a patient of the proper or commendable type.

—Sushruta-Samhitá, "Sutrasthánam" (? 5th century B.C.)

Excerpts of the Code of Medical Ethics adopted by the American Medical Association in 1847 and endorsed by the South Carolina Medical Association at its first meeting in 1848 appear in this issue. A large portion of this document would be considered "etiquette" rather than "ethics" as the latter discipline is now understood. Yet many of the issues are timeless. They reflect not only the highest ideals of medicine as a beneficent calling but also the nuances of how flawed human beings relate to one another in times of danger and uncertainty.

Of special interest is the section on "the duties of physicians in regard to Consultations" (section 1, article 4). Back then the process of consultation was a far cry from what we know today. Physicians usually had similar training; there were no formal residencies or fellowships. Therefore, today's usual reason for consultation—the need to obtain an opinion from a physician in another specialty—did not apply. Egos were on the line. Consultations were carried out by prior arrangement in the presence of the attending physician, who took the lead in demonstrating the history and physical examination to the consultant. The consultant then questioned and examined the patient, and the two physicians retired "to a private place for deliberation." These discussions were to be kept strictly confidential. The consultant's opinion was then presented to the patient in the presence of the attending physician, and formal rules governed the way differences of opinion were resolved. Reading between the lines, we can sense the uneasiness inherent in the old mot that "a consultant is someone who doesn't answer the question and steals your patient." Reputations hinged on the outcome.

Also of interest is the section on "obligations of patients to their physicians." How one might enforce such obligations, then or now, is left unclear. However, this section offers what might be called a "flip side" to the Samaritan contract—the need for the receiver of care to respect the rights and needs of the caregiver. An update of this section might read somewhat as follows:

• *Check out your doctor's qualifications.* Did he complete an approved residency? Is she board certified? In medicine, the authors noted, "the world ought not to suppose that knowledge is intuitive."

• *Check out your doctor's local reputation.* Is medicine his main interest or does he seem mainly interested in his hobbies and social standing? The authors recommended a physician "whose habits of life are regular, and who is not devoted to company, pleasure, or to any pursuit incompatible with his professional obligations."

• *Don't be reluctant to consult your doctor about seemingly-minor problems.* The authors observed that trivial signs might in fact be "the forming stage of violent diseases." This desideratum translates into the desirability of a good relationship with one's primary care physician.

• *Tell your doctor what you think is really causing the problem.* The patient "should never be afraid of thus making his physician his friend and adviser." Trust your doctor to maintain confidentiality. If you're concerned about confidentiality, tell her that, too; she can't do her best unless she knows what you know.

• *Be concise. Remember that your doctor is on a schedule and that he has other patients waiting.* Thus, "a patient should never weary his physician with a tedious detail of events or matters not appertaining to his disease." Think about what you want to say in advance, and try to give your doctor an edited version.

• *Take your doctor's prescriptions and advice to the letter.* Doctors call that "compliance." The "*Sig:*" on their prescription forms literally means "take that." If you have reason to doubt the wisdom of your doctor's prescriptions or advice, be frank and negotiate with her. Don't try to fool your doctor.

• *Don't self-medicate without your doctor's knowledge.* A surprising portion of medical problems, including life-threatening conditions, arise from taking over-the-counter drugs or the offerings of health food stores and "alternative medicine" advisers. The authors of the 1847 code advised patients to "never allow themselves to be persuaded to take any medicine whatever, that may be recommended to them by the self-constituted doctors and doctresses, who are so frequently met with, and who pretend to possess infallible remedies for the cure of every disease."

• *Don't "doctor-shop" without your doctor's knowledge.* Serious problems can also arise when patients receive prescriptions and advice from different physicians without their knowledge. The authors urged the "great importance that physicians should act in concert; for, although their modes of treatment may be attended with equal success when employed singly, yet conjointly they are very likely to be productive of disastrous results." Beware of drug interactions!

• *If you decide to leave your doctor for another doctor, let him know this.* Follow the Golden Rule! If freely asked, your doctor will probably tell you that he knows he's not the best doctor for everybody. You always have the perfect right to choose someone else. But remember that she probably cares about you (whatever you might think!), and therefore "justice and common courtesy require" that you tell your doctor why you're dismissing him.

• *When possible and practical, be considerate about when and where you consult your doctor.* It's best to start early in the morning by calling her secretary and asking when she's available. Remember that your doctor is usually on a tight schedule. And, since he's human too, avoid calling him "unnecessarily during the hours devoted to meals or sleep."

• *Express your appreciation.* Doctors, like everyone else, relish sincere positive feedback. And doctors like to believe, even in this cynical world, that theirs is a higher calling; that they see medicine as a way to serve others, not just a way to make a living. Therefore the patient "should, after his recovery, entertain a just and enduring sense of the value of the services rendered him by his physician; for these are of such a character, that no mere pecuniary acknowledgment can repay or cancel them."

Good advice, indeed! And should we physicians not similarly respect the rights of those in other walks of life? Whatever their shortcomings, our forebears certainly knew the ramifications of the Golden Rule!

—CSB

On the Cover:

SOUTH CAROLINA MEDICAL ASSOCIATION—1848-1998
ONE HUNDRED AND FIFTY YEARS AGO

Pictured on the cover is the page from the minutes of the Medical Society of South Carolina for September 1, 1847, in which "Dr. Moultrie Chairman of the Committee on the best means of carrying out the recommendations of the medical convention" (American Medical Association meeting in Philadelphia May 5, 1847) reported:

> *Resolved that a Committee be appointed to write the individual members of the Medical Profession throughout the State, by the printing of a circular to assemble in Charleston on the ____ day of Feb'y 1848 for the purpose of organizing a State Medical Society, and for the consideration of such other matters as may be brought to their notice in connexion with the objects which have already been mentioned; and the said Committee be requested to embody in their Circular the subjects upon which the State Society will be called upon to act, requesting such of the individuals of the profession as may attend on that occasion, to reflect upon the same and to come prepared to act advisedly and with dispatch. This resolution was also unanimously adopted, On motion it was also Resolved that the Committee should consist of the same gentlemen as drew up the Report, viz Drs. Moultrie, Wragg, Jervey, Simons and Horlbeck(5), also that the Monday in February preceding the races be the day appointed for the calling of the Convention.*

This resolution and the meeting it called were the beginning of the South Carolina Medical Association. The convention assembled on February 14, 1848, at the Hall of Apprentices' Library Society where Dr. Elias Horlbeck offered the following Preamble to a series of resolutions related to the organizational process:

> *Whereas, the members of the Medical Profession of the State of South Carolina are assembled on this occasion for the general purpose of advancing the character and usefulness of this calling, as well as for other objects more particularly set forth in the circular of the Medical Society of this city, and whereas it has been ascertained by experience that the united and concerted action of individuals engaged in similar pursuits facilitates the accomplishment of their ends—*

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Alliance Page

MEMBERSHIP

In the South Carolina Medical Association Alliance (SCMAA), membership recruitment and retention are among the most challenging aspects of the alliance involvement. As in any organization, our membership is vital to our success. Many of us have witnessed the impact of changing times, changing lifestyles, and the dynamics affecting the practice of medicine.

As we near the 21st century, county, state, and national alliances have combined to form a national medical family of immeasurable worth. Our common concerns and shared challenges bind us in ways that will outlast this period of transition. We are bound through every person whose life is improved by our efforts, through every future physician who benefits financially and academically as a result of our support of American Medical Association Education and Research Foundation (AMA-ERF), and through every law passed that helps preserve the physician-patient relationship.

The SCMAA does not measure our success in numbers alone. In each of the 23 organized counties, there are many community projects which promote health initiatives such as immunizations, adolescent health, and elder care. Most of the local alliances support AMA-ERF by using a Christmas Sharing Card. Our organization is very strong in networking to produce an impact on legislation.

Throughout all of the changes in the past, the fundamental mission of the SCMAA has always remained the same—to promote better health for every South Carolinian, to support the medical profession, and to offer understanding and friendship to each other. This year, one of the SCMAA Membership Committee goals is to increase membership by 10 percent in every county. Has your spouse become a member? The South Carolina Medical Association Alliance continues to improve many lives in this state. Help us to continue this tradition into the next century.

Rosemary M. Cook (Mrs. David A.)
Vice-President and Membership Chairman

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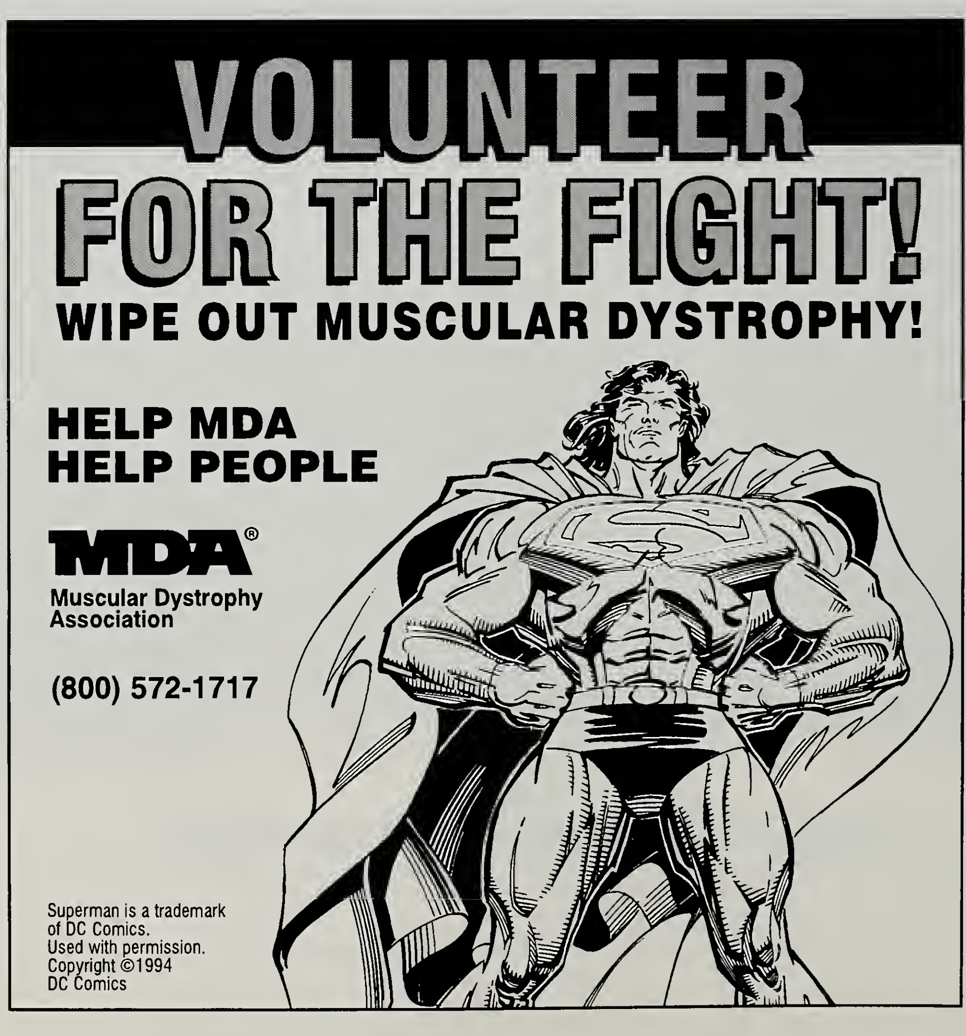

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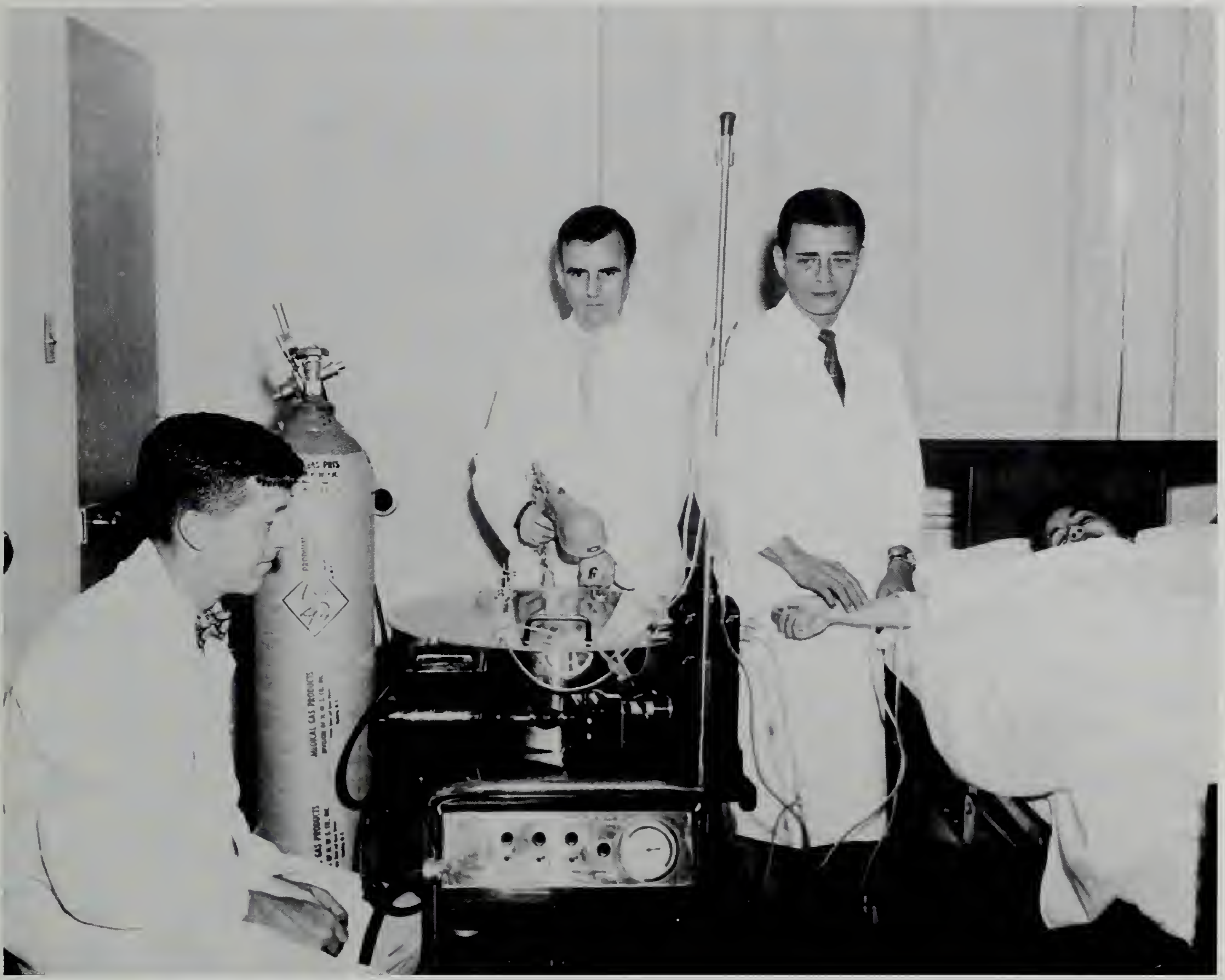

Drs. Cheves Smythe, John Buse, and Arthur Williams setting up for the first hemodialysis in South Carolina in 1957. (See J SC Med Assoc 93:11, 1997)

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Gray Matter

"*Matters of Interest to South Carolina Physicians.*"

Thornton & Thorne give the medical community something to think about this month.

HOW MUCH DOES A CIGAR REALLY COST?

Cigar and wine tasting parties are quite the rage these days, yet few people stop to evaluate how much it really costs to smoke one cigar. If you buy life insurance, the cost will be significant.

There have been dramatic decreases in the cost of term life insurance over the last few years. By far, the biggest premium decreases have been for insureds that do not use tobacco in any form.

Insurance companies offer their lowest premiums to insureds that have not used tobacco for a period of time immediately preceding the date of policy application. The period of "no tobacco use" varies from company to company but is usually at least 24 months and can be as long as 60 months.

And, yes, just an occasional cigar disqualifies an applicant for a no tobacco use policy! The question reads "have you used tobacco in any form in the past 36 months?" It may read "24" or some other number of months but the point is that even one cigar will disqualify the applicant for the best rate.

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Preferred Smoker	Cigarettes	$3,530
Standard Smoker	Cigarettes	$5,040

The Manufacturers Life Insurance Company (USA) 10 Year Level Term (97)

The annual cost of $740 makes the occasional cigar pretty expensive. What's even more startling is that most companies would classify this applicant as a smoker, thereby resulting in an annual difference of over $2,200.

At these costs, one should certainly stick to only the finest Havanas. However, if you haven't been smoking or chewing, and your term policy is more than two years old, you might realize substantial savings by exchanging it for a new policy.

Views expressed herein are those of the authors only and in no way represent the SCMA. We do not give tax advice. Only your attorney and accountant are qualified to do so.

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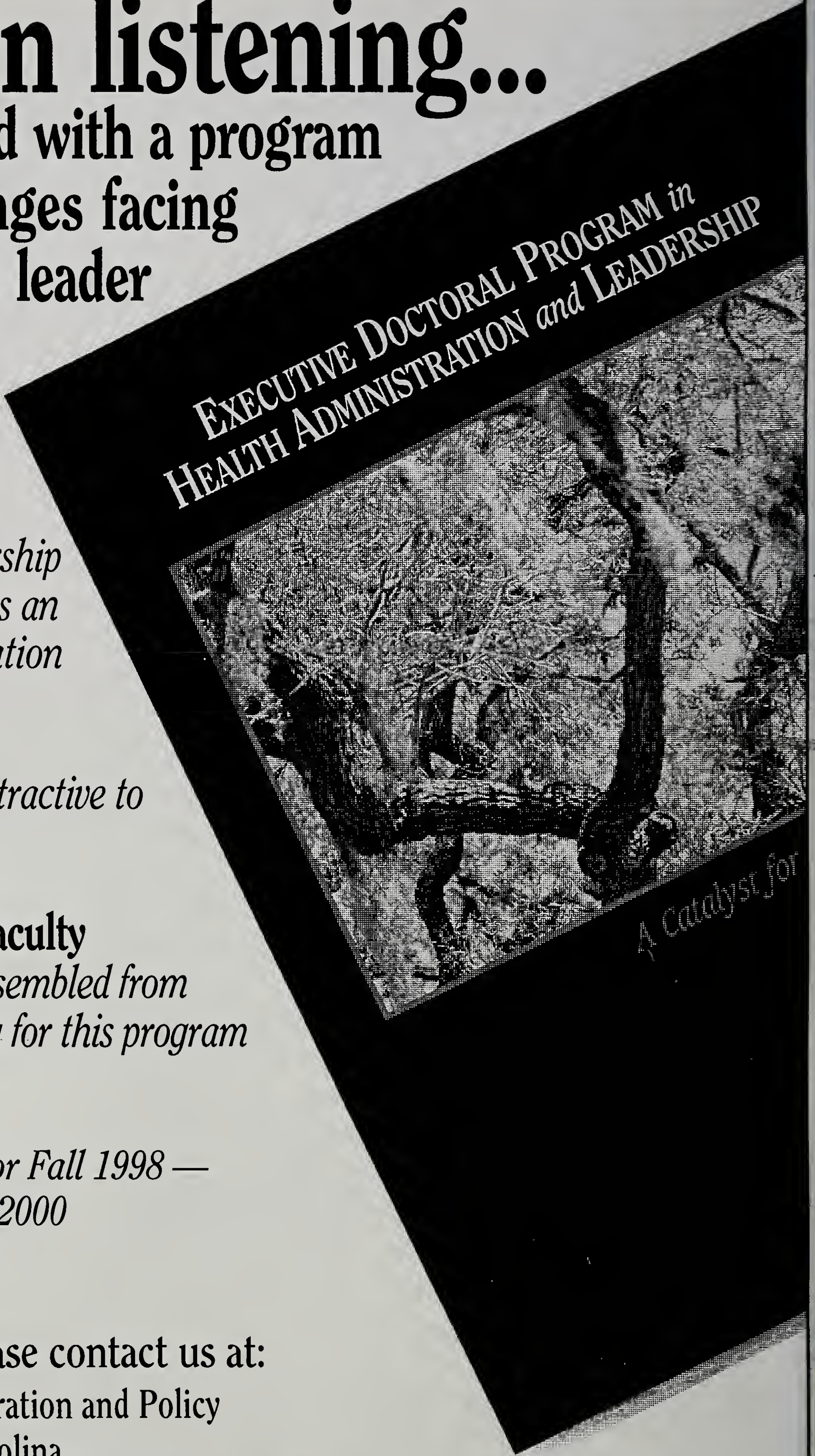
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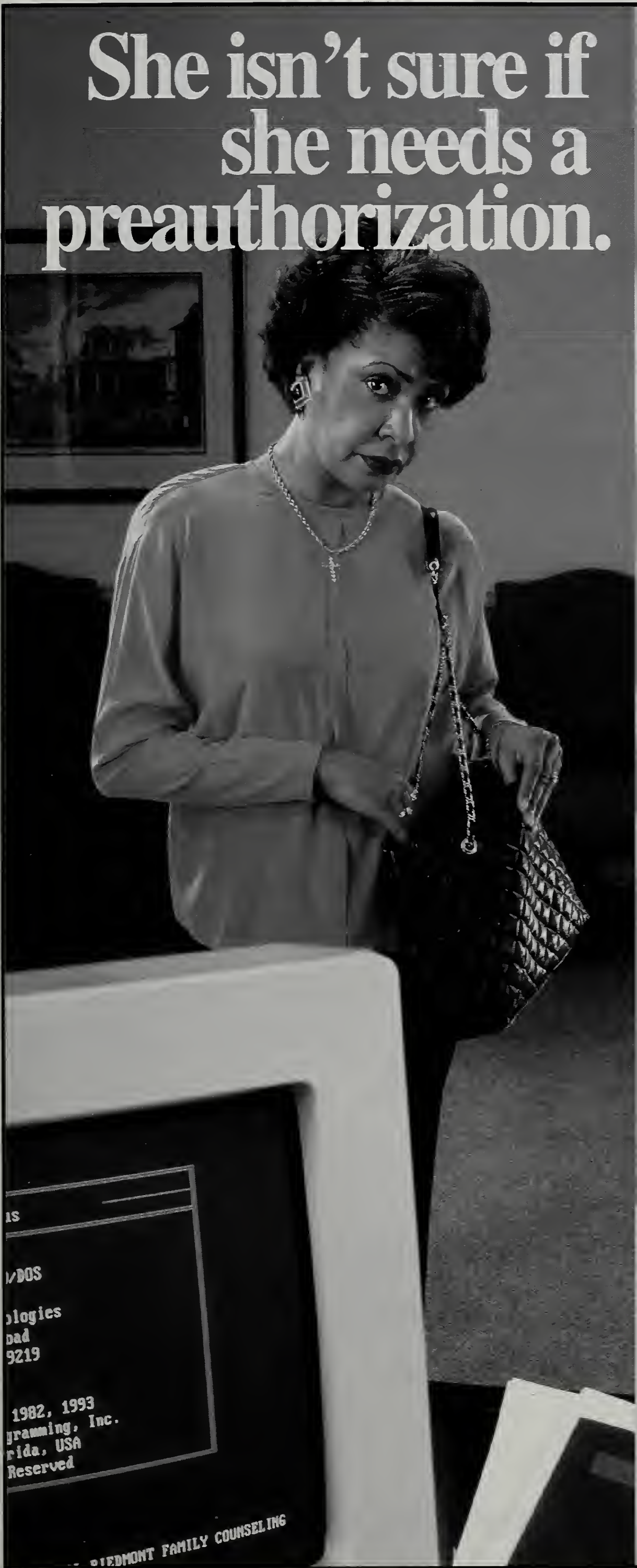
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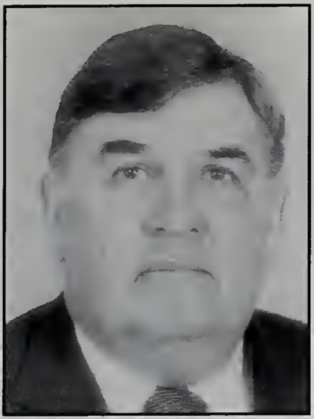

President's Page

ANOTHER OPTION

Ten years ago when I became more than casually involved with organized medicine, my perception was that health system reform was on a fast track and whatever system was to evolve would do so quickly. However, the American public rejected Clinton's Managed Competition Plan and now appears to be having trouble accepting some components of managed care. The gatekeeper system and limited physician choice are two of the linchpins of the managed care industry that are giving consumers trouble.

Examples of the public displeasures with managed care were evident in two recent popular movies, John Grisham's "The Rain Maker" and "As Good As It Gets," starring Jack Nicholson. Both flicks slammed the managed care industry. The contentious issues were the interpretation of benefits and limited access to specialists. It was apparent from the audience's response that they judged the insurance industry to be the villains. Movies are not the ultimate opinion maker, but they can express current public opinion in an effective way, and public opinion is going to eventually dictate what our health system will become. The question remains: What kind of system do the American people want?

There appears to be a gradual revolution going on, not only related to health care, but where there is a shift of power from government to markets. My introduction to this concept came at last year's American Medical Association Leadership Conference when I heard a Harvard business professor, Regina Hertzlinger, speak on market-driven health care. Subsequently, I purchased her book, *Market Driven Healthcare: Who Wins Who Loses in the Transformation of America's Largest Service Industry.* Not only were the lecture and book an eye opener to me, it was as good a crystal ball as I have seen as to what might happen in the future. The book also served me as a confidence builder. During this past year when my convictions seemed to be faltering, I would read the book and regain the confidence that we were on the right track. Dr. Hertzlinger's book describes a consumer controlled health care system as opposed to a government controlled or a managed care controlled system. She describes precisely which organization will survive and which ones will fail in the ongoing health care revolution.

In my opinion, this book is a must read for the leaders in the health care field. In addition, it informs the individual practitioner about how to survive in this consumer controlled health care system. From a personal standpoint, my group of seven physicians is implementing several of her suggestions. For instance, we have extended our office hours and work on Saturdays and Sundays, which certainly is a convenience to our patients. Furthermore, we are focusing on office or outpatient pediatrics, which is what we do best. I urge you all to read the book, and I promise that you will feel better when you finish it.

S. Nelson Weston MD

S. Nelson Weston, M. D.
President

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LAPAROSCOPIC SPLENECTOMY IN A COMMUNITY SETTING

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MARK SMITH, M. D.

The first reported splenectomy was by an Italian surgeon in 1549. The first elective splenectomy of modern times was by the English surgeon, Spencer Wells, in 1887.[1] By the turn of the century, many more splenectomies were performed, but with a mortality rate as high as 35 percent. By the 1920s, the mortality rate had been reduced to seven percent by Mayo.[2] Today, splenectomy is much safer because of improved anesthetics and monitoring, and because of the availability of blood transfusions, perioperative antibiotics and vaccines. However, it remains technically demanding and complications associated with it include significant morbidity, long hospital stays, and delayed return to usual activity.[1] With respect to each of these drawbacks, the laparoscopic approach to splenectomy appears an attractive alternative. Cushieri, et al. described the technique for laparoscopic splenectomy in 1992.[6]

TABLE 1

INDICATIONS FOR LAPAROSCOPIC SPLENECTOMY

INDICATION
• Idiopathic thombocytopenic pupura
• Autoimmune hemolytic anemia
• Hodgkin's lymphoma
• Thrombotic thrombocytopenic purpura
• Leukemia with hypsplenism
• Hereditary spherocytosis
• Splenic abscess
• Systemic lupus erythematosis with hypersplenism
• Metastatic melanoma

Reprint from Flowers, et. al; Annal of Surgery. July 224:(1) 19-28, 1996.

Various diseases selectively require surgical removal of the spleen (Table I). These include more commonly, idiopathic thrombocytopenic purpura, hereditary spherocytosis, and trauma. Less commonly, splenectomy is indicated in thrombotic thrombocytopenic purpura, certain hereditary hemolytic anemias and certain myeloproliferative disorders.[1,2]

We present a case report of laparoscopic splenectomy and discuss the feasibility of the procedure and important technical considerations.

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CASE REPORT

A thin, physically mature, 12-year-old female with a history of hereditary spherocytosis was referred for biliary colic. An ultrasound revealed cholelithiasis and a moderately enlarged spleen. The patient was anemic and the medical oncologist recommended that she undergo splenectomy at the time of her cholecystectomy. Pre-operatively, type and screen was performed and the patient was given vaccines and an IV antibiotic. Under general anesthesia, the patient was positioned in the 45 degree right lateral decubitus position on a bean bag with velcro straps across the thighs. After rotating the table so that the patient was flat, two 12 mm. ports and two 10 mm. ports were placed (figure 1). A 12 mm. infraumbilical port was placed initially by the Hassan technique. A 10 mm. port was placed in the epigastrium, just below the xiphoid. A 12 mm. camera port was placed in the midline halfway between the initial two ports. Finally, a 12 mm. port was placed in the left anterior axillary line midway between the costal margin and the anterior superior iliac spine. Exploration of the abdominal cavity was carried out, including a search for accessory spleens.

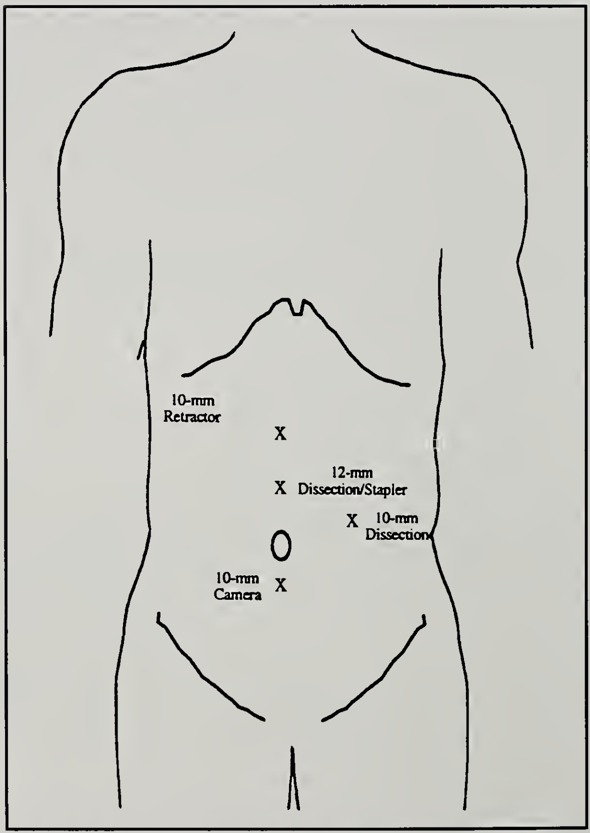

Figure 1. Trocar placement for patients undergoing laparoscopic splenectomy.

With the patient rotated to the decubitus position and the surgeon and assistant located on the patient's right, the dissection was initiated. The assistant, standing above the surgeon, operated the camera and retracted the spleen through the upper two ports. The surgeon operated the harmonic scalpel through the flank port and provided counter-tension through the umbilical port. The splenocolic ligament was taken down initially, followed by the posterior lateral attachments which were ligated superiorly. The patient was rotated to the supine position and the peritoneum anterior to the hilum of the spleen was taken down, allowing access to the short gastrics. These were taken in a superior direction, thus freeing the superior pole of the spleen. To this point, the dissection was carried out using a harmonic scalpel. Attention was then turned towards the hilar dissection which was performed with the blunt-tipped laparoscopic dissecting instrument. Several windows were created between the vessels which were transected with two firings of the linear endostapler.

With the spleen free of its attachments, the assistant moved to the patient's left and the 10 mm. umbilical catheter was removed. A sterile bag was placed in the abdominal cavity through this site. Once the spleen was in the bag, a grasping forcep was used to guide the open end of the bag out of the umbilical incision. A Ring forcep was used to morcellate the spleen for removal.

With the addition of a 5 mm. right subcostal port for retraction, the gallbladder was removed in the usual fashion. All incisions were closed with a fascial stitch and a subcuticular skin stitch. The time required to take down the splenic attachments was 45 minutes. It took 120 minutes to morcellate and remove the spleen. Total operative time, including the cholecystectomy, was 210 minutes. Estimated blood loss was less than 100 ccs. The patient was transferred from the recovery room to a regular bed and was ambulatory within 36 hours. She required three uncomplicated hospital days and then was discharged to home under her mother's care.

DISCUSSION

The advantages of laparoscopic surgery over the conventional approach of cholecystectomy and fundoplication have been well-documented. It is appropriate that we should continually evaluate the feasibility of laparoscopy for more difficult procedures such as splenectomy, adrenalectomy, etc. One can find many reports and small retrospective studies in the literature that advocate laparoscopic splenectomy.[3-9] There are ideal candidates, in whom the procedure could be performed safely, who certainly would benefit from this technology. However, it would be fraught with hazard to assume that because we are capable of removing the spleen by laparoscopy, that it should be offered to all splenectomy candidates. Thus, the need for selectivity. Because of the scarcity of cases and the more demanding technical skills of the procedure, even surgeons with advanced skills should be more selective than with the more routine laparoscopic cholecystectomy. The criteria for selectivity will become clearer as we gain more experience. Certainly body habitus, spleen size and co-morbid condition are important.[7] However, splenomegaly alone is no longer a contraindication as supported by recent reports.[8] Other factors might include age, previous abdominal surgery, coagulopathy, hemoglobin level and transfusion risks.

For laparoscopic splenectomy to be accepted by internists and hematologists-oncologists as a safe and reasonable option, it must be performed by surgeons with advanced laparoscopic skills able to perform the surgery without increased morbidity or mortality. Because splenectomy is an infrequent operation, it would be hard to develop these skills directly. In addition to knowledge and skills obtained at advanced laparoscopic courses, one has to adapt skills obtained from more frequently performed laparoscopic procedures. More routine laparoscopic procedures such as laparoscopic cholecystectomy and appendectomy are associated with a lower risk of bleeding and require control of only minor vessels. In addition, minimal structure recognition is required. In laparoscopic splenectomy, bleeding is a greater concern because of the tenuous splenic capsule and the need for major vascular control. Thus, the procedure requires different laparoscopic skills and more caution. Laparoscopic fundoplication and inguinal hernia repair both require extensive blunt dissection with ongoing structure recognition. In addition, in taking down the short gastrics with fundoplication, one gains experience with the harmonic scalpel, an invaluable tool in laparoscopic splenectomy.

The harmonic scalpel is a great advancement in laparoscopic hemostasis.[9] From our experience with laparoscopic Nissens, it is more hemostatic than electrocautery. It is more expedient than hemoclips because there is no need for multiple instrument changes. There is no smoke and it is effective on submerged tissue. The harmonic scalpel can provide a bloodless field with minimal surrounding tissue injury. The dissection of the gastro-splenic ligament can take place closer to the spleen. This decreases the concern for bleeding from the short gastric secondary to post-operative gastric distention. Also, the harmonic scalpel facilitates its own use because of cavitation. That is, it produces an air bubble dissection of the tissue which provides a plane in which to advance the harmonic scalpel.

Positioning of the patient for laparoscopic splenectomy is very important. Initial reports describe the patient in the supine position with the table rotated to the right.[3-6] Recently, authors have recommended the right lateral decubitus position on a bean bag.[7-9] We employed the latter and rotated the table to the supine position as necessary. Most of the procedure was performed with the patient in the decubitus position; however, port placement and dissection of the short gastrics is best completed in the supine position.

While port placement appears of utmost importance with laparoscopic fundoplication, this is less important with splenectomy. Some have suggested five ports and others four. The sizes of ports have been even more variable. We have used four ports, all 10 mms. or greater, to allow for interchanging of instruments. We feel this is especially important while learning the procedure.

The order of steps in taking down the splenic attachments is paramount, but seemingly is obvious.[3,4] If one accepts the use of the endostapler for vascular control as safe, it is easy to see that dissection of the lateral attachments of the spleen will facilitate placement of the endostapler across the hilar vessels. With that in mind, the spleno-colic ligament is easily identified and an accessible place to start. From there it is a matter of tension-countertension, remembering that the splenic capsule is tenuous. Once the spleen is attached only by the hilar vessels, these can be transected either by a single firing of the endostapler (reduced blunt dissection, but increased risk of bleeding) or by multiple firings (more secure vascular control).

One of the difficulties we encountered was finding a large, durable sterile bag in which to place the detached spleen. We sterilized a nonflammable, specimen bag from the pathology department. Our patient's slightly enlarged spleen fit into the mouth of the bag with narrow margins. Other reports have suggested a 750 cc nylon extraction bag (Cook Medical Incorporated, Bloomington, IN)[6] or a heavy polypropylene bag with a ribbed stop nylon reinforcement.[5] For removal of the spleen, manual crushing with ring forceps worked adequately. Bagging and morcellating the spleen consumed a great deal of our splenectomy operative time of 165 minutes. Obviously, by finding the right instrument, we will improve in this regard.

The strongest argument against the laparoscopic approach to splenectomy is the possibility of missed accessory spleens. The incidence of accessory spleens in elective splenectomy is said to vary from five to twenty percent.[9] It is not likely this figure will increase as a result of laparoscopy. In fact, it is possible that some accessory spleens will be missed. However, the rate of recurrent disease as a result of missed accessory spleens at laparoscopy is more important in comparing the effectiveness of laparoscopic splenectomy. Additionally, these may also be removed with laparoscopy. This will require long term follow up and may ultimately determine the future of laparoscopy for splenectomy.

CONCLUSION

Although it will remain an infrequent procedure, we believe that laparoscopy is a reasonable and safe approach to performing splenectomy for selected patients performed by surgeons proficient in advanced laparoscopy. We feel these skills can be obtained in a community setting. In patients selected as appropriate candidates for laparoscopic splenectomy, there will be improved patient comfort, decreased average hospital stay and quicker return to usual activity and work. The selection criteria will require further studies. To a large degree the appropriateness of this in community surgical practice depends on sound judgement based on broad laparoscopic experience without the influence of over-zealous excitement for technologic advancement. ❐

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HEALTH AND ECONOMIC IMPACT OF CIGARETTE SMOKING IN SOUTH CAROLINA, 1995*

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Cigarette smoking is the leading cause of preventable morbidity and premature mortality in the United States.[1] Each year, it is responsible for over 410,000 deaths, over 5 millions years of potential life lost (YPLL), and about $68 billion of total smoking-related costs in the United States.[2-4] Since the release of the first Surgeon General's Report in 1964, the knowledge of health consequences of cigarette smoking has been greatly increased and well-documented to include contributing to negative effects of major diseases such as lung and esophagus cancer, cardiovascular disease, and chronic obstructive pulmonary disease.[1] Despite this fact, there are still 48 million adult Americans smoking cigarettes,[5] which will result in costly health, social, and economic consequences.[2-4]

The health and economic consequences of cigarette smoking have been estimated at a national level but not since 1990 in South Carolina. Since the health and economic impact of cigarette smoking in South Carolina has not been fully studied,[6] this report describes the smoking-attributable mortality (SAM), YPLL, indirect mortality, and indirect morbidity costs and direct health care costs in South Carolina.

METHODS

The Smoking-Attributable Mortality, Morbidity, and Economic Cost (SAMMEC 3.0) software[7,8] was used to estimate SAM, YPLL, and indirect mortality costs in South Carolina. SAM calculates the percentage of deaths attributable to cigarette smoking. YPLL is total years of life lost to life expectancy due to smoking-attributable premature death. Indirect mortality costs were defined as the cost of lost income and productivity resulting from premature death attributable to smoking-related diseases and conditions. Smoking-attributable indirect morbidity and direct health care costs in South Carolina were estimated based on proportion to the total economic costs,[3] which include indirect mortality, indirect morbidity, and direct health care costs. The indirect morbidity costs include the costs of lost income and productivity of persons who are unable to work or keep house because of illness and disability caused by smoking-related diseases. Direct health care costs are the expenditures for detection, diagnosis and treatment of smoking-related diseases and conditions.

SAMMEC uses attributable risk formulas

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based on smoking prevalence and relative risk for diseases and conditions among current and former smokers. Age and gender-specific cigarette smoking prevalence was estimated from the South Carolina Behavioral Risk Factor Surveillance System (BRFSS) at the South Carolina Department of Health and Environmental Control (DHEC). The maternal smoking prevalence was computed according to Birth Certificate data obtained from DHEC's Public Health Statistics and Information System (PHSIS). Age and gender-specific mortality data for smoking-related diseases were obtained from DHEC's PHSIS. Mortality data also included smoking-related burn deaths and four smoking-related perinatal conditions. The 1995 population data were obtained from the South Carolina State Budget and Control Board.

RESULTS

There were 5,900 smoking-attributable deaths in South Carolina in 1995, with more men (4,067) dying than women (1,833). About 1,754 South Carolinians died of smoking-attributable heart disease and 1,693 died from lung cancer (Table 1). In 1995, there were 89,188 YPLL attributed to cigarette smoking, with 58,974 years lost for men and 30,214 for women (Table 2). Cigarette smoking attributed over $790 million of indirect mortality costs. The indirect morbidity costs and direct health care costs were estimated at $134,250,680 and $406,427,225 (Table 3).

DISCUSSION

In 1995, there were 33,500 deaths in South Carolina. Smoking-attributable mortality accounted for 17.6 percent (5,900) of all deaths. Cigarette smoking resulted in about 89,188 YPLL and cost over $1.3 billion in South Carolina in 1995. Heart disease and lung cancer accounted for about 58.4 percent of smoking-attributable mortality and 59.8 percent of smoking-attributable YPLL.

Every South Carolinian, both smokers and non-smokers, shares the tremendous costs of cigarette smoking. At an estimated cost of $1.3 billion, a reduction in tobacco product spending would improve heath and vital statistics and increase employment even although tobacco industry claims that tobacco makes economic contributions in the United States.[9-11] Enforcement is needed in regulating the

TABLE 1. SMOKING-ATTRIBUTABLE DEATH BY CAUSE AND GENDER, SC, 1995

Cause of Death	Men	Women	Total
Neoplasms			
Lung	1240	453	1693
Other	336	138	474
Cardiovascular Diseases			
Heart Disease	1214	540	1754
Cerebrovascular Disease	287	151	438
Other	216	89	305
Respiratory Diseases			
Chronic Airways Obstruction	457	296	753
Other	297	156	453
Other			
Perinatal and Burn	20	10	30
Total	4067	1833	5900

TABLE 2. SMOKING-ATTRIBUTABLE YEARS OF POTENTIAL LIFE LOST* BY CAUSE OF DEATH AND GENDER, SC, 1995

Cause of Death	Men	Women	Total
Neoplasms			
Lung	17786	8057	25843
Other	5523	2533	8046
Cardiovascular Diseases			
Heart Disease	19006	8458	27464
Cerebrovascular Disease	4369	2927	7296
Other	2662	1306	3968
Respiratory Diseases			
Chronic Airways Obstruction	5119	3970	9089
Other	3394	2293	5687
Other			
Perinatal and Burn	1115	680	1795
Total	58974	30214	89188

* to life expectancy of 1991 US population.

TABLE 3. SMOKING-ATTRIBUTABLE ECONOMIC COSTS, SC, 1995

Cost Category	Costs($)
Indirect Morbidity Costs	134,250,680
Direct Health Care Costs	406,427,225
Indirect Mortality Costs*	790,511,963
Total Economic Costs	1,331,189,868

*based on present value of future earnings at four percent discount rate for population age 35 and over.

tobacco industry, increasing tobacco excise taxes, eliminating advertising and access to tobacco products among persons aged 17 and younger, enacting bans of indoor cigarette smoking, and providing smoking cessation. Efforts for antismoking continue emphasizing awareness of the danger of cigarette smoking, preventing teens from starting smoking, and providing cost-effective smoking cessation services.

In addition, it is also important that collaborative efforts among public health organizations, lawmakers, tobacco farmers, and tobacco companies continue to aim the shift of tobacco products to other healthy industry products. A long-range plan for this shift of the tobacco industry, in particularly tobacco growers in South Carolina, needs to be established. It is necessary to have grants to build financial support for tobacco farmers and train people who lost jobs in cigarette manufacturing to develop new skills. The legislation on the proposed tobacco settlement must ensure that all of those affected are given the opportunity to find gainful employment without undue suffering. However, the mission is clear that reducing and eliminating tobacco products have far-reaching implications for a healthy nation.[12]

CONCLUSION

Knowledge and health conscious behavior motivate the increasing regulatory restriction on tobacco industry. The elimination of tobacco would have a significant impact on health and vital statistics in the United States. About 5,900 deaths in South Carolina could have been avoided every year if this was a tobacco-free society. Each of those deaths lost an average of 15 years of life. Surely, it is not a viable argument for the cigarette company to negatively affect people's health in exchange for the creation of employment and exise taxes. Without cigarettes, South Carolinians could live healthier and longer. ❐

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WOMEN, MEDICINE, AND HEALTH: A SOCIOLOGICAL PERSPECTIVE

KRISTY MAHER MCNAMARA, PH. D.*

Exploring the issues of women, medicine, and health from a sociological point of view changes the angle of vision on issues that are typically viewed from the perspective of the natural sciences. Sociology as a discipline focuses on the social causes and consequences of human behavior. Medical sociology, a major subfield within the discipline, highlights the role of social factors in health and illness. Instead of emphasizing biological factors, medical sociologists focus on other variables such as social conditions, culture, norms, values, health behaviors and attitudes. In other words, medical sociologists believe that health is not simply a matter of biology but the result of a number of factors that are social, cultural, political, and economic in nature. Using this changed angle of vision, this paper will briefly explore issues of mortality, morbidity, medical research, and the medicalization of issues with a primary focus on women.

A review of health statistics and the relevant sociological research indicates two rather consistent findings about gender and health: women live longer than men, yet they experience more illness. An exploration of life expectancy, both cross-culturally and historically, documents the most consistent sex difference that is observed across contemporary industrialized societies—that women, on average, live longer than men. A review of the life expectancy at birth, by sex, for selected countries is displayed in Table 1. The United States ranks relatively low when compared to many other countries in terms of both male and female life expectancy. In all the countries listed, however, women have a longer life expectancy than men. Looking historically at life expectancy in the United States from 1900 to 1990, it is clear that women's advantage increased significantly from the turn of the century until 1975 (See Table 2). In 1900, there was only a two-year difference in female and male life expectancy. By 1970, the gap widened to over seven years. While narrowing in the last 20 years, by 1990 there was still a discrepancy of seven years.

A number of theories have been offered to explain these historical and cross-cultural differences in life expectancy. At least part of the difference appears to be attributable to biological factors, such as chromosomal differences. These biological factors are thought to account for the higher number of miscarriages of male fetuses, the greater ratio of male to female infant deaths (146:100), and deaths at all ages due to congenital abnormalities (120:100).[1] The fact that males are weaker physiologically than females is demonstrated by higher mortality rates from the prenatal to the neonatal stages of life and beyond. The chances of dying during the prenatal stage are approximately 12 percent greater among males than females and 130 percent greater during the neonatal stage.[2] As a physical being, males seem to be more vulnerable than females, even before exposure to the differential social roles and gender expectations of later life.

As mentioned above, medical sociologists focus more attention on social factors as contributing to this gap in life expectancy. Personality styles, health behaviors (e.g. drinking alcohol, smoking, lack of exercise), exposure to occupational hazards, and accidental death rates are all examples of social behaviors that might contribute to the differences in male and female life expectancy. At

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TABLE 1. LIFE EXPECTANCY AT BIRTH, BY SEX, FOR SELECTED COUNTRIES.*

Country	Female Life Expectancy (in years)	Male Life Expectancy (in years)
Japan	82.5	76.2
France	81.5	73.1
Switzerland	81.3	74.1
Netherlands	81.1	73.7
Canada	80.6	73.7
Spain	80.3	73.6
Sweden	80.1	74.2
Hong Kong	80.1	74.3
Norway	80.0	73.3
Italy	79.9	73.3
Australia	79.6	73.3
Greece	79.4	74.3
Germany	79.2	72.6
Finland	79.0	70.9
Austria	78.9	72.1
United States	78.6	71.8
England and Wales	78.4	72.9
Portugal	78.2	71.1
Belgium	78.2	71.4
Denmark	77.9	72.2

*Data cover the period 1983-1990.
Source: U.S. Department of Health and Human Services 1993: 42-43.

an abstract level, it appears that the American conceptualization of masculinity may be bad for your health. Explore, for example, the fact that accidents cause more deaths among males than females which, in many cases, reflects a difference in societal expectations about gender. High accident rates among males may be attributed to greater exposure to risks on the job and in their leisure activities. Many of the most dangerous jobs in America, according to the Metropolitan Life Insurance Company, are occupied by men. Examples include structural steel workers, lumberjacks, bank guards, coal miners, and state police officers. Similarly, driving at high speeds and participating in violent sports are more common among males.

Another factor that may contribute to higher mortality rates among men stems from occu-

TABLE 2. LIFE EXPECTANCY IN THE UNITED STATES FROM 1900 TO 1990

Year	Male	Female
1900	46.3	48.3
1920	53.6	54.6
1930	58.1	61.6
1940	60.8	65.2
1950	65.6	71.1
1960	66.6	73.1
1970	67.1	74.8
1975	68.8	76.6
1980	70.0	77.4
1985	71.1	78.2
1990	71.8	78.8

Source: U.S. Department of Health and Human Services 1993: 44; 1986:84; U.S. Department of Commerce 1990: 72; 1987: 69.

pational competition and pressure associated with a job. The lifestyle of an upwardly mobile middle-class male in America that is career driven is thought to contribute to the development of high levels of stress. This, in turn, results in categorizing middle-aged professional males in the United States today as a "high-risk group" according to many life insurance companies. This is especially true if they smoke, are overweight, or tend to overwork. Heavy alcohol use has also been identified as a risk factor for some diseases (e.g. cirrhosis of the liver) and even deaths from automobile accidents. Men and boys drink greater quantities and with more frequency than do women and girls. In short, societal conceptions of masculinity, which encourage job competitiveness, risky behaviors, and unhealthy life styles, may contribute to the differences in male and female longevity. Women in American society have traditionally been socialized to act safely, to seek help, and to avoid risks. Males, in contrast, are encouraged at an early age to be adventurous, independent, and unafraid of taking risks. This situation may change as some of the gender stereotypes of society loosen and the barriers from women's entrance into typically male areas of work and play break down.

While men have a higher rate of mortality, women appear to have a higher morbidity or sickness rate. According to the National Center for Health Statistics, females have higher rates of acute illness (e.g. infectious diseases, digestive and respiratory conditions).[3] In fact, injuries are the only area of acute health problems in which males have a higher incidence than females. When exploring the rate of chronic or long-term conditions, a pattern emerges indicating that women are more likely to have a higher prevalence of chronic conditions that are not a leading cause of death (except for diabetes). For example, women experience higher rates of thyroid disease, anemia, and gallbladder conditions, chronic enteritis, migraine headaches, and arthritis. Men, on the other hand, have more of the chronic health problems that end one's life (e.g. emphysema, chronic heart disease).

While there are no comprehensive sociological theories explaining the differences in disease distribution and morbidity rates, there is a substantial amount of data documenting the differences in illness behavior exhibited by men and women. Namely, women engage in more illness behavior than men: they visit the doctor's office more often and exhibit a much greater use of health services than men.[4] This pattern is consistent even when health care utilization related to maternity services are excluded from analysis. One sociological explanation for women's higher morbidity argues that women do not necessarily have more sickness than men. Rather, it could be that they are simply more likely to seek help given the societal conceptions of gender that allow for help seeking behavior among women (i.e. they are frail and need assistance), but discourage it among men (i.e. they are stoic and physically strong, supposed to "act like a man").

There is some evidence to support this hypothesis. Waldron found that, although women delay seeking treatment as long as men, men tend to underestimate the extent of their illness more than women do, and they utilize preventive services less often.[5] Additionally, in an unpublished study on thyroid disease, men were found to have a statistically significant higher rate of undetected thyroid disease than women.[6] In other words, more women had known cases of thyroid dysfunction, but a substantial number of men had undiagnosed thyroid dysfunction (as indicated by abnormal levels of thyroid hormones). This could be partially due to the fact that men engage in less illness behavior and therefore have higher rates of undetected illnesses.

Finally, the medical community is not free of gender stereotypes and may serve to reinforce them unintentionally. In fact, historical data indicates that doctors have frequently equated normal femininity with the societal expectations of being sick.[7] During the 1800s and early 1900s, the delicate and frail woman was a status symbol for white upper-class families. She often served as a symbol of femininity. During this time period, many women did display symptoms of physical weakness, for example, fatigue, shortness of breath, fainting spells, chest and abdominal pains. These symptoms, however, were probably the consequence of stylishness. Clothing styles, such as corsets and multiple layers of clothing required to be "well-dressed" could have contributed to women's poor health, not women's "inferior constitutions."[8]

More recent research on treatment of persons with chest pains indicates gender biases play a role in medical treatment. There is a widespread belief among the general public that women are at a low risk for heart disease and its consequences, including heart attacks. Recent research has documented that many doctors do not respond as quickly to female patients' symptoms of heart disease as they do to male patients.[9] Women frequently find themselves in a position where they have to prove that there is a genuine problem with their hearts by being significantly sicker (e.g. having a heart attack or congestive heart failure) in order for their complaints to be taken seriously by a doctor. This helps to explain why women are less likely than men to survive heart bypass surgery. By the time they undergo the operation, they are usually much sicker and slightly older than the male patients.[10] Additional research shows that when women go to emergency rooms with complaints about chest pains, they wait twice as long as men to see a doctor, twice as long for an electrocardiogram, and are 50 percent less likely to be given medications that inhibit further damage to the heart and other parts of the body following a heart attack.[11]

These gender biases in medicine are in some ways a reflection of society's gender stereotypes invading the field of medicine. Research reveals a long history of negative and stereotypical attitudes among physicians toward women. These prejudices were not infrequently learned by physicians during their medical school training. Medical textbooks and journals reflect the sexist tradition and help perpetuate it. For example, research on popular obstetrics and gynecology texts find patronizing and sexist depictions of women. One text describes menstrual cramps as evidence of personality disorders.[12] In a review of gynecology textbooks over a 125-year period, Scully and Bart (1979) found that very little had changed over the years in regard to stereotypes of female patients. There were consistent statements that attributed inferior sexuality and natural submissiveness to women, as well as relegating them to primary roles of reproduction and homemaking. One text from the early 1970s cautioned gynecologists to inform their patients to be sure to follow the lead of their husbands in sexual relations but not to become completely passive. Gynecologists were told to remind their patients who came to see them for advice about their role in intercourse that, "No one likes to 'take a tone-deaf individual to a concert.'"[13] With negative images such as these, it is no wonder that some doctors may unintentionally mistreat their female patients.

Certainly overt examples, such as these, are rarely found in textbooks used in medical education today, but many informal subcultural norms are still riddled with sexism and inequities. According to Nechas and Foley,[14] "Sexual remarks, jokes and innuendos are everywhere [in medical school]. One resident remarked in amazement how, even among these highly educated professional men, it is completely acceptable to make jokes at the expense of women."

In short, the reality of the situation is quite clear—women live longer lives but experience more illness than men. In fact, it has been stated that women comprise 60-70 percent of all doctor's office visits, undergo more complex procedures, more examinations, more laboratory tests, receive more prescriptions, and take more medications than men. Despite the fact that women are pervasive figures in every hospital, doctor's office, and pharmacy in the United States, until recently, they have been largely excluded from the majority of medical research. While this may be partially due to a well intended paternalistic attitude on the part of medicine (i.e. to protect unborn fetuses), the implications of this trend can be dangerous to women's health when results from all male samples are extrapolated to the population in general.

According to Nechas and Foley (1994), much medical research has utilized all male samples. For example, one of the largest nationally funded longitudinal studies about health and aging included only men during its first 20 years despite the fact that women comprise a larger portion of the elderly population. Another well known study, the National Institute of Health, sponsored a five-year Physician's Health Study, showed that taking an aspirin every other day could prevent heart attacks. However, since the sample consisted of over 22,000 men and no women, it remains uncertain what effects aspirin consumption will have on women.

The exclusion of women from medical research is not a new problem. In fact, it has been over 10 years since the Public Health Service Task Force issued its 1985 report called "Women's Health Issues." This report concluded that gender bias in health care research and delivery had created significant gaps in knowledge about women's health. As a reaction to this report, the National Institute of Health informed grant applicants that they wanted a scientific rationale if women were not included in study populations. Unfortunately, very little changed as a consequence, and it was not until 1991, over four years after the policy was first introduced, that the grant application researchers used to draw up their funding requests was revised to reflect the new guidelines.

In response to continuing criticism about the exclusion of women from medical research, the National Institute of Health established an Office of Research on Women's Health and in 1993, it announced details concerning the Women's Health Initiative. This 10-year program of studies will involve 160,000 women and focus on the causes of heart disease, cancer, and osteoporosis. While it is true that including both sexes in research will add tremendously to the cost of doing research, due to increased sample sizes, it is not a legitimate reason to ignore over half the population. A good example of the consequences of excluding women from medical research is found in a recent newspaper article on painkillers.[15] Specifically, this article raises the question of whether there are fundamental biological differences in the way the sexes experience pain. Researchers at the University of California at San Francisco found that women reported better pain relief than men from a new combination of narcotic drugs. The narcotics were a neglected class of opiate-like drugs that are rarely used because they were considered less effective—according to studies done mostly on men. Surprised, the researchers combed previous medical studies to find evidence of a similar result only to find that no one had examined the question of whether the sexes differed in the way they respond to pain killers. These findings, and others like them, should raise important questions about the ways in which men and women differ in their response to similar medical treatment.

A final area of interest for medical sociologists in the study of women, medicine, and health is the concept of the "medicalization" of women's health issues. Medicalization is the term used to describe the process of labeling something as appropriately discussed in the arena of medicine. For example, childbirth was medicalized in the 1800s. Prior to the 19th century, the birth of a child was looked upon as a family event, not a medical one. Women gave birth in the presence of female friends, relatives, and midwives who took a noninterventionist approach. The participants' role was to be supportive and to try and ease the labor of the birthing woman by making her as comfortable as possible. With the intervention of "modern" medicine, the goal was to make childbirth safer, easier, and quicker. Initially, however, the doctors' interventions were crude and in many cases harmful (e.g. bloodletting, the use of leeches, chloride or mercury purgatives) resulting in a higher maternal and infant mortality rate than those births attended by midwives.[16]

In the long run, medical science and technology certainly benefitted women and saved many lives, but much of the medical intervention into women's normal biological functioning continues to be unnecessary and, in some cases, harmful. At times, medical technology inappropriately used or inadequately tested harms and sometimes kills women and their offspring. Consider medical intervention into pregnancy. During a normal pregnancy women gain weight, retain fluids, and experience nausea. Doctors occasionally respond to these changes by prescribing special diets and medications. These may prove helpful, but unfortunately drugs, such as thalidomide, have produced severe fetal deformities and illness. The drug diethylstilbestrol (DES), a synthetic estrogen, was once widely prescribed to prevent miscarriages, but was taken off the market when it was found to cause cancer in the daughters of women who had taken it.[17]

Other studies suggest that doctors may intervene in pregnancy for the sake of safety, convenience, and perhaps profit.[18] For example, the rate of caesarian deliveries in the United States has more than doubled since 1975 when it was just 10.4 births per 100. Today, nearly one-quarter of all births involve caesarian delivery, although the Center for Disease Control maintains that a rate of 15 per 100 births is more medically appropriate.[19] Most caesarians are scheduled, rather than emergency deliveries, and the CDC maintains that about 36 percent of caesarian deliveries are medically unnecessary. Some doctors will not allow a woman who has had one caesarian delivery to attempt a vaginal delivery for a subsequent birth even though many experts claim such a policy is medically unfounded.[20] One of the primary reasons that the government has become more concerned about the high rate of caesarian deliveries is their contributions to the rising cost of medical care. Caesarians are almost twice as expensive as vaginal deliveries and, interesting, the majority of them are performed in for-profit hospitals on women covered by private medical insurance.[21]

In conclusion, a sociological investigation on women, health, and medicine illuminates many interesting social trends and practices. Taking together, research indicates that our construction of gender can be hazardous to our health. Traditional masculinity (i.e. aggressiveness, risk taking, etc.) seems to place men at a greater risk for a variety of physical conditions, such as heart disease and stroke, various forms of cancer, and chronic liver disease. Men's greater likelihood to smoke, drink alcohol, and engage in violence makes them susceptible to these diseases, but also to accidents, homicide, suicide, and alcohol and illicit drug abuse. In some ways, it seems that the more a person conforms to our traditional view of masculinity, the greater health risks they face. This finding may account from some of the gender gap in longevity found both cross-culturally and historically.

Our concepts of femininity, on the other hand, allows women to seek more medical attention and engage in illness behavior which may, in the long run, extend their lives. While higher levels of morbidity might certainly reduce the quality of women's lives, greater preventive care and doctor's visits may enhance its quantity. Unfortunately, when women do enter the medical arena they are often treated with procedures and pharmaceuticals that have been tested only on men. Only with greater research using female subjects can we rectify this historical inequity. Women may also be taken less seriously than their male counterparts with similar complaints by doctors who have accepted, unquestioningly, gender stereotypes about women as weak, complaining or needy. Medical schools should strive to reform their curricula and pedagogy to be more gender sensitive and inclusive. Finally, women may find their natural biological processes medicalized, at times to their advantage (with increased technology and understanding) but all too often for convenience and/or profit. Only with critical examination of the motivation behind certain practices can we ensure quality, compassionate care for all persons, male or female. ❐

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SCMA NEWSLETTER

A PUBLICATION OF THE SOUTH CAROLINA MEDICAL ASSOCIATION

Audria Belton Benn, Editor
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March 1998

MEDICARE UPDATE

Medicare Part B Claims Processing Moved: The Medicare Part B Claims Processing, MSP, Professional Reimbursement, Service, Education, and Appeals departments of Medicare Part B have moved. Use this address for making personal visits or for shipping and overnight deliveries to these departments:

Medicare Part B
Palmetto Government Benefits Administrators
ParcOne
10261 Two Notch Road
Columbia, SC 29229-4387

The Medicare Part B Medical Affairs and Medical Review departments have remained at the Fontaine Business Center. All regular mail should continue to be sent to:

Medicare Part B
Palmetto Government Benefits Administrators
P.O. Box 100190
Columbia, SC 29202-3192

The following list indicates new mail codes and fax numbers. All telephone numbers remain the same.

Department	Mail Code	Fax Number
Part B Appeals	AK-180	(803) 865-3821 Do not fax unless requested
Part B Claims Processing	AK-155	Not available
Part B Education	AK-185	(803) 865-3821
MSP	AK-160	(803) 865-3828
Part B Customer Service	AK-145	(803) 865-3825
Professional Reimbursement/Certification	AK-125	(803) 865-3816

ARU Updates: The Automated Response Unit's (ARU) option of ordering a duplicate remittance will no longer be available under option 2 (Claim Information). To request a duplicate remittance, you must use option 3 (Order a Duplicate Remittance). This remittance will be sent to you within one week to 10 days. Also, if you are using the ARU to check claim status, you can get information about previous claims selecting option 2 followed by option 1.

For example, let's say you filed a claim four times. The first time it paid, the other three times it denied. You would enter the date of service, and the ARU would tell you about the last denial. You would select option 2 followed by option 1. The ARU would back up to the previous denial. You would keep selecting option 2 followed by option 1 until the ARU gave you information about the claim that was paid.

For more information about the ARU, please see page five of the Winter 1998 Medicare Briefly *or page 42 of the February 1998* Medicare Advisory.

Interest Rate Update: HCFA has changed the interest rate Medicare applies to clean claims not paid within 30 days to 6.25 percent effective January 1, 1998. The interest Medicare charges when they have overpaid their customers, when an insurance company should have paid primary, or when an attorney or beneficiary owes delinquent liability money has changed to 14.50 percent effective January 28, 1998.

Interest is assessed in 30-day periods. Customers are allowed 30 days to make payment. On the 31st day, Medicare will assess two periods of interest, one for the first 30 days, and one for the second. Third party payers are allowed 60 days from the date Medicare demands to pay for services which they should have paid primary. On the 61st day, Medicare will assess three periods of interest, one for the first 30 days, one for the second 30 days, and one for the third 30 days. ❐

CANDIDATES FOR SCMA OFFICES

OFFICERS

President-Elect:	Elected annually. *William H. Hester, MD*, seeking election.
Secretary:	Elected annually, limited to three consecutive terms. *William H. Hester, MD*, elected 1996. Eligible for one additional term. Will not seek reelection. *Richard E. Ulmer, MD*, seeking election.
Treasurer:	Nominated by the Board of Trustees. Elected annually, limited to three consecutive terms. *J. Capers Hiott, MD*, elected 1997. Eligible for two additional terms. Will seek reelection.

MEDICAL DISTRICT TRUSTEES

District 1*	*Richard E. Ulmer, MD*, elected in 1990 to fill the unexpired term of J. Chris Hawk, III, MD. Reelected in 1991, 1993, 1995, and 1997. Resigning mid-term to seek office of secretary. One year left of term. Seat open.
District 2	*James J. Hill, Jr., MD*, elected in 1996. Eligible for three additional terms. Will seek reelection.
District 2 (Metropolitan)	*Gerald A. Wilson, MD*, elected in 1996. Eligible for three additional terms. Will seek reelection.
District 4	*Boyce G. Tollison, MD*, elected in 1995 to fill the unexpired term of Jerry R. Powell, MD. Reelected in 1996. Eligible for three additional terms. Will seek reelection.
District 4 (Metropolitan)	*John P. Evans, MD*, elected in 1996. Eligible for three additional terms. Will seek reelection.
District 6	*Kenneth L. DeHart, MD*, elected in 1994, reelected in 1996. Eligible for two additional terms. Will seek reelection.
District 6 (Metropolitan)	*William N. Boulware, MD*, elected in 1996. Eligible for three additional terms. Will seek reelection.
District 8 *	*Dallas W. Lovelace, III, MD*, elected in 1989 to fill the unexpired term of John W. Rheney, Jr., MD. Reelected in 1990, 1992, 1994, and 1996. Not eligible for reelection. Seat open.
District 9	*Timothy S. Llewelyn, MD*, elected in 1998 to fill the unexpired term of Michael W. Holmes, MD. Eligible for four additional terms. Will seek reelection.

AMA DELEGATES AND ALTERNATES (All terms expire 12/31/98)

Delegates:	*Walter J. Roberts, Jr., MD*, elected AMA Alternate Delegate in 1988 to fill the unexpired term of Kenneth Owens, MD. Reelected in 1988 to serve 1989-90. Elected AMA Delegate in 1990 to serve 1991-92. Reelected in 1992 to serve 1993-94. Reelected in 1994 to serve 1995-96. Reelected in 1996 to serve 1997-98. Eligible for one additional term. Will seek reelection.
	Daniel W. Brake, MD, elected AMA Alternate Delegate in 1990 to serve 1991-92. Elected AMA Delegate in 1992 to serve 1993-94. Reelected in 1994 to serve 1995-96. Reelected in 1996 to serve 1997-98. Eligible for one additional term. Will seek reelection.
Alternates:	*S. Nelson Weston, MD*, elected AMA Alternate Delegate in 1993 to serve 1994. Reelected in 1994 to serve 1995-96. Reelected in 1996 to serve 1997-98. Eligible for two additional terms. Will seek reelection.
	Carol S. Nichols, MD, elected AMA Alternate Delegate in 1996 to serve 1997-98. Eligible for three additional terms. Will seek reelection.

** Not eligible for reelection.*

SCMA WORKSHOPS

EMPLOYMENT CONTRACTS FOR PHYSICIANS: POINTS TO PONDER

APRIL 2, 1998

Physicians as employees. This saying used to be an oxymoron, but no more. Both anecdotal evidence and national data show a significant increase in the number of physicians practicing medicine as employees. In addition, most of these physicians are practicing under a written employment agreement. Whether the employer is a hospital, practice management firm, or large physician group, there are certain issues that need to be considered in reviewing any employment agreement. This seminar, specially designed for physicians who currently have an employment agreement or may be considering one in the future, will highlight, in practical terms, important questions that a physician must understand before signing any employment agreement. Register by March 23, 1998.

6:00 p.m. - 8:30 p.m.; Registration: 5:30 p.m.
Columbia, South Carolina Medical Association Headquarters

PRINCIPLES OF DOCUMENTATION

APRIL 16, 1998

As managed care becomes more prevalent, it is now more important to have accurate and concise documentation in each patient's medical record. Proper documentation can protect the practice from fraud and control the cost of care. In this full-day program, participants will explore the various principles of documentation and record keeping. Register by April 6, 1998.

9:00 a.m. - 4:00 p.m.; Registration: 8:30 a.m.
Columbia, Clarion Town House

Space in each program is limited, so be sure to register early. *If you have any questions, please call Melissa Hamby, extension 253, at 798-6207 in Columbia, or at (800) 327-1021 statewide, or by e-mail at* melissa@scmanet.org.

SC COALITION AGAINST DOMESTIC VIOLENCE AND SEXUAL ASSAULT GOES SANE

The South Carolina Coalition Against Domestic Violence and Sexual Assault (SCCADVASA) is embarking on a SANE initiative. Sexual Assault Nurse Examiner (SANE) is a program that trains nurses to provide more sensitive treatment to victims and to conduct thorough forensic sexual assault protocol.

"In states where SANE is in place, victims don't have to wait for hours to get examined and conviction rates are higher because better evidence is collected," explains Susan Higginbotham, Executive Director of SCCADVASA. The SANE program originated in Memphis, Tennessee in the 1970s and has been replicated in Oklahoma, California, Georgian, New York, and several other states.

A one-day conference is scheduled in Columbia on April 23 with speakers who are knowledgeable about SANE from medical, forensic, law enforcement, rape crisis, and prosecution perspectives. Additionally, a statewide training for nurses interested in participating in SANE certification is tentatively scheduled for fall 1998. *For more information, about SANE and the task force, contact Susan Higginbotham at (803) 750-1222.* ❐

PCN UPDATE

Physicians Care Network (PCN) provider participation continues at an all-time high. There are now 5,813 participating physicians, 603 participating ancillary providers, and 78 participating hospitals. Don't forget to notify PCN when you have address, group name, or tax ID number changes. Early notification will ensure that there are no claims payment delays.

PRECERTIFICATION PHONE NUMBER CHANGES

The phone number for precertification has changed. Please change your information to reflect the new toll-free number as (800) 447-7055.

PROVIDER DIRECTORY UPDATE

PCN has gone to print with the new provider directories which will be mailed with the next provider manual update.

NEW GROUPS

- Baker Materials, Summerville; effective 1/1/98; Access/Peer Review.
- Zeus Industries, Orangeburg; effective 2/1/98; Hospital Access/Peer Review.
- Burroughs and Chapin, Conway; effective 1/1/98; Shared Risk.
- Wells Aluminum, Belton; effective 1/1/98; Access/Peer Review.
- Presbyterian Homes of South Carolina, Clinton, Columbia, Florence, & Summerville; effective 2/1/98; Shared Risk.

If you have questions about PCN, please contact Cindy Osborn, Network Coordinator, PCN, at (803) 798-6207, extension 257 or statewide at (800) 327-1021. You can also send an e-mail message to cindy@scmanet.org.

MEDICAID UPDATE

Home Health Venipuncture Coverage: The Balanced Budget Act of 1997 has deleted Medicare coverage for venipuncture services for Home Health recipients. The Department of Health and Human Services, Division of Home Health, will continue to provide coverage for venipuncture nursing visits and associated aide visits through the Medicaid program, provided these services are medically necessary. A *Medicaid Bulletin* #HH98-02 dated February 4, 1998, was issued concerning this policy. *Copies of this bulletin may be obtained by contacting Jon Seay at (803) 253-6182.* ❐

SCMA 150TH ANNUAL MEETING AND SCIENTIFIC ASSEMBLY

The South Carolina Medical Association's Annual Meeting and Scientific Assembly is scheduled for April 23-26, 1998, at the Charleston Place Hotel, Charleston, South Carolina. You should have received information regarding the meeting, including a registration and hotel reservation form. ***If you have not preregistered for the meeting, don't delay. Register NOW!***

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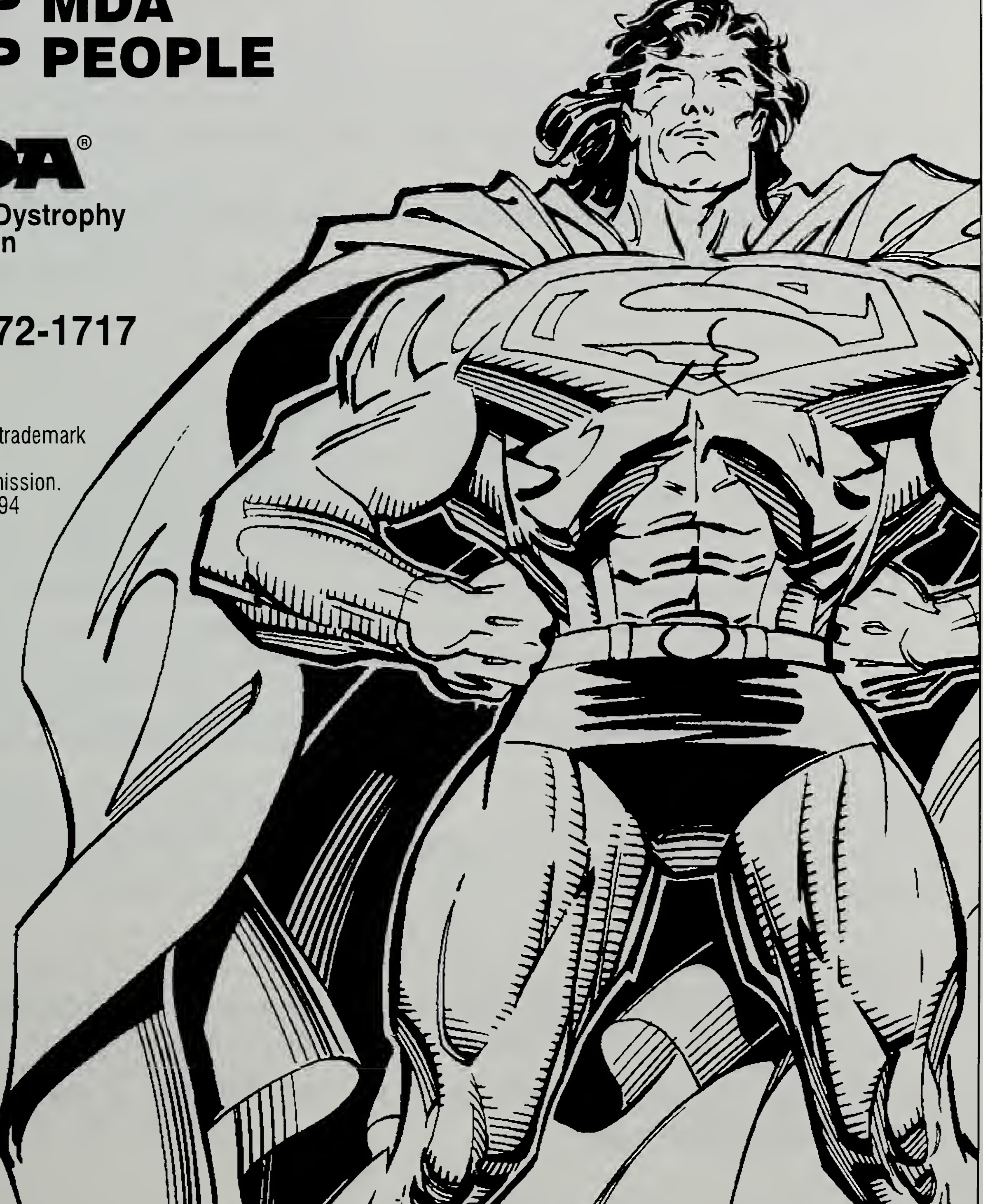

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HOW SOUTH CAROLINA PHYSICIANS RATE MANAGED CARE: A SOUTH CAROLINA FAMILY PRACTICE RESEARCH CONSORTIUM STUDY*

JANICE C. PROBST, PH. D.**
GAYE G. CHRISTMUS, M. P. H.

Managed care is changing the way physicians provide and patients utilize medical care. Limits by MCOs on choices and services can affect consumers' satisfaction with their physicians and the care they receive. Popular and professional publications have extensively recounted patient fears and negative experiences related to managed care. MCOs, aware of the need to generate positive public relations, have begun surveying their patients and publicizing positive reports of patient satisfaction.

Less frequently reported are physicians' views of managed care. Managed care plans reimburse physicians in a variety of ways, including salary, capitated fees, discounting, and performance bonuses.[1] These financial structures, together with cost saving measures and accountability activities, can influence the degree to which physicians feel able to practice high quality medicine and their satisfaction with medicine as a profession. The medical literature, however, is nearly devoid of studies of physician satisfaction with MCOs, with the exception of a small body of studies within staff model health maintenance organizations.[2-4] Current expansion in managed care, however, is not occurring among staff model organizations but among MCOs that offer capitation contracts to local physicians.[5] While some studies suggest that physicians are generally satisfied with contractual arrangements,[6] others indicate that as many as three out of four physicians are dissatisfied with the managed care plans that cover their patients.[7,8]

The importance of physician input in assessing plan quality was emphasized in a recent study by Borowsky and associates,[9] which surveyed physicians participating in three Minnesota health plans to determine if physician ratings could meaningfully distinguish among plans. The authors concluded that physician opinion more clearly separates plans than does patient opinion, which tends to cluster in the "satisfied" range. The authors attribute differences to physicians' experience caring for sick individuals, since most plan members, being healthy, have little experience actually obtaining care.

The study reported here, designed and carried out before Borowsky and associates published their results, has a similar perspective. Physicians have unique knowledge of the medical needs of patients and whether differing health plans assist or hinder meeting those needs.[10] To obtain physicians' perspectives on managed care companies currently operating in our state, the South Carolina Family Practice Research Consortium funded a survey of primary care physicians in South Carolina. The survey had two purposes—to assess managed care in the state overall and to provide a baseline for measuring change should managed care become more widespread. Because of the low number of responses eventually received for individual MCOs, a related goal of publishing physician evaluations of specific MCOs could not be met.

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METHOD

Sample: Family medicine, internal medicine and general practice physicians licensed in South Carolina but not in residency training comprised the study population. Resident physicians were excluded because they generally are shielded from the business aspects of practice during training, and thus cannot comment on issues related to payors; pediatricians were excluded because they could not comment on Medicare. In March 1997, the authors mailed a satisfaction survey to half (n=1102) of these primary care physicians. Surveys were anonymous, to protect respondent confidentiality; return of a survey constituted informed consent to the study. Two follow-up mailings were sent. Responses were received from 275 physicians, or 25 percent of those surveyed.

Respondents did not differ from the sample in terms of gender or county of practice. Most respondents were men (84 percent) and practiced in the five largest urban counties in the state (52 percent). Family medicine physicians were over-represented in the respondent group (60 percent of respondents, versus 43 percent of the sample), and internal medicine physicians were under-represented (30 percent of respondents, versus 48 percent of the sample group). General practice and "other" physicians constituted the remaining respondents. The under-representation of internal medicine physicians may be due to the number of specialists within this group who do not have primary care practices. Most respondents were in private solo practice (28 percent) or private, single-specialty practice (28 percent). Private multi-specialty practice accounted for 13 percent of respondents; academic medicine, 12 percent; and remaining physicians (19 percent) reported a variety of practice settings.

Survey Instrument: "Managed care" was narrowly defined as care provided on a capitated basis and using a "gatekeeper" approach to specialist care. To provide a common reference across payors, physicians were asked to rate Medicare in the same manner as MCOs. The survey contained twelve items regarding the managed care insurer with the most patients in the respondent's practice, ten comparable items regarding Medicare, and nine items addressing the respondent's general opinion of managed care and demographic characteristics.

Analysis: Chi Square tests were used for comparison of categorical variables. For multivariate analysis, logistic regression was employed.

FINDINGS

Managed Care in General: On average, physicians reported that just under a third of their patients (32 percent) were covered by managed care through gatekeeper arrangements. No difference in percent covered was associated with physician gender, specialty, practice type (excluding HMO physicians), or location of practice. Few physicians reported that they had been required to sign a gag clause (seven percent) or felt pressured to practice outside their area of expertise (11 percent).

Responses revealed high levels of dissatisfaction with managed care. Only 11 percent of physicians reported being satisfied with managed care as compared to traditional methods of paying for services; 52 percent of physicians reported dissatisfaction, with the remainder neutral. Dissatisfaction with managed care in general was greatest among internal medicine physicians (63 percent dissatisfied) and those who indicated "other" as their specialty (61 percent), versus 46 percent among family medicine and 43 percent among general medicine physicians ($p = .047$). There was no relationship between the percent of patients in the respondent's practice covered by managed care and satisfaction with managed care as a method of payment.

Satisfaction was slightly higher when physicians were asked their opinion of "the managed care companies you deal with." Approximately one in every six physicians (16 percent) was satisfied with the companies dealt with, while 45 percent were dissatisfied.

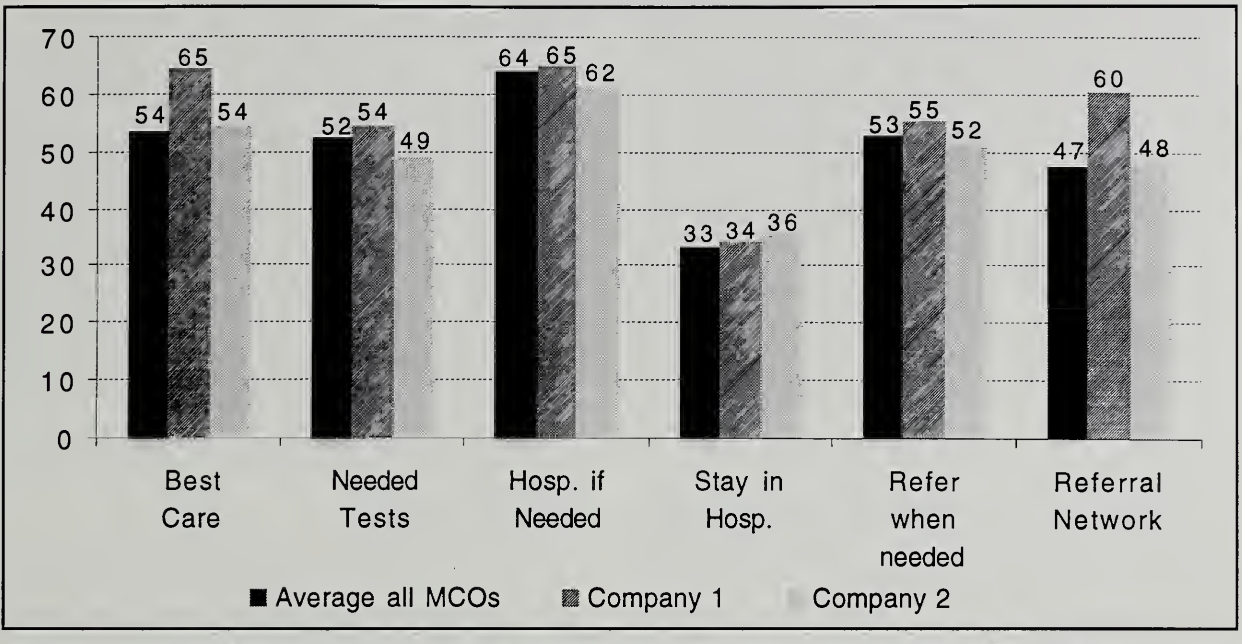

Figure 1. Percent of Respondents Expressing Satisfaction with Plan Characteristics Affecting Patient Care, Medicare versus all Managed Care Companies.*

*All differences are significant at p < .05 or better except "Stay in hospital"

Bars show percentage of physicians giving values of 4 or 5 on a 5-point scale, where 5 = "agree" and 1 = "disagree."

Key for bar headings:

Best care	When I care for patients insured by this organization I can provide the best medical care available.
Needed tests	When I care for patients insured by this organization I can order necessary tests and procedures.
Hosp if need	When I care for patients insured by this organization I can hospitalize patients when needed.
Stay in hospital	When I care for patients insured by this organization I can keep patients in the hospital as long as necessary.
Refer	When I care for patients insured by this organization I can refer patients to specialists when necessary.
Referral network	How satisfied are you with this company's referral network?

Dissatisfaction was higher among internal medicine physicians (56 percent dissatisfied) than among family (41 percent) or general practice physicians (38 percent), but differences were not statistically significant. A multivariate analysis examining the effects of gender, urban location, practice, specialty, concentration of Medicare and managed care, and years in practice on dissatisfaction found that with these variables held constant, physicians in the upper quartile for proportion of patients covered by Medicare were more likely to be dissatisfied (OR 2.47, CI 1.29-4.70), as were physicians in South Carolina's six most urban counties (OR 1.99, CI 1.12 - 3.53).

Dissatisfaction with managed care may affect physician satisfaction with the medical work environment in general. A majority of respondents (56 percent) were satisfied with their current work situation. Physicians with greater managed care involvement, however, were less satisfied than others; among physicians in the highest quartile of managed care in their practices, satisfaction was significantly lower (43 percent, p=.021). In multivariate analysis paralleling that used above, being in the upper quartile of managed care involvement strongly increased the probability that a physician would be dissatisfied (OR 2.62, CI 1.14-6.01). In addition, internal medicine physicians were more likely to be dissatisfied than other physicians (OR 4.17, CI 1.14-6.01).

Comparing MCOs and Medicare: Physicians were asked to assess the specific MCO, by name, covering the greatest number of patients in their practice. The average proportion of patients covered by the MCO rated was 20 percent, while the median proportion of patients covered by that MCO was 10 percent. Among the 222 physicians who provided MCO ratings, 15 different companies were listed. The average ratings assigned those companies are discussed here. To provide a common perspective, satisfaction with MCOs was compared to satisfaction with Medicare, since the latter represents a national program whose parameters are well-known.

Physicians were significantly less satisfied with the leading MCO in their practice than with Medicare on five of six plan characteristics affecting patient care (Figure 1). Only one statement related to patient care, "I can keep patients in the hospital for as long as necessary," showed no significant difference between Medicare and the physician's leading MCO. Fewer than half of physicians agreed that they could hospitalize as long as needed under either type of insurer (47 percent Medicare vs. 33 percent MCOs).

Responding physicians were significantly more satisfied with the amount of payment they receive from MCOs than from Medicare (30 percent vs. 11 percent satisfied, $p<.0001$). Although the percentage of respondents who reported satisfaction with the promptness of payment was similar across the two types of organizations (30 percent vs. 26 percent), physicians were more likely to be dissatisfied with Medicare while remaining neutral toward MCOs.

Recommending an MCO to patients: The survey asked physicians if they would recommend the primary MCO in their practice to patients and to other physicians. As a point of reference, the survey asked the same (hypothetical) question about Medicare. Only 51 percent of physicians would recommend the primary MCO in their practice to patients, compared to 68 percent who would recommend Medicare ($p=.0002$). To explore the factors which influenced this decision, we performed logistic regression analysis using the six patient care and two payment questions asked in the survey.

Other considerations held equal, physicians' perceptions of the patient referral process influenced their recommendations most strongly. Respondents who believed they can refer patients when necessary (OR 3.64, CI 1.39-9.54) and who were satisfied with the referral network (OR 3.57, CI 1.48-8.73) were three times more likely to respond that they would recommend the MCO to patients than were other physicians. None of the variables studied significantly affected whether or not a physician would "recommend" Medicare to patients.

Recommending an MCO to other physicians: A majority of responding physicians would recommend both their principal MCO and Medicare to another physician (54 percent and 62 percent, respectively; no significant difference). However, multivariate analysis showed that different factors influenced the recommendation decision for MCOs versus Medicare.

The ability to hospitalize patients when necessary (OR 3.62, CI 1.29-10.19) and the size of the MCO's referral network (OR 2.93, CI 1.19-7.18) were, other things held equal, the most important factors in a physician's assessment of whether he or she would recommend the MCO to another physician. Thus, physicians who were satisfied with an MCO's hospitalization rules and their ability to refer within its network were more likely to recommend the plan.

When hypothetically deciding whether to recommend Medicare to another physician, the two factors influencing the physician's answer were perceived ability to keep patients hospitalized as long as needed (OR 2.78, CI 1.31-5.88) and promptness of payment (OR 5.85, CI 2.05-16.70). Physicians who were satisfied with the length of hospitalization permissible under Medicare rules and with Medicare's speed of payment were more likely to recommend it than were dissatisfied physicians.

Distinguishing among MCOs: One purpose of the study was to test whether a brief survey

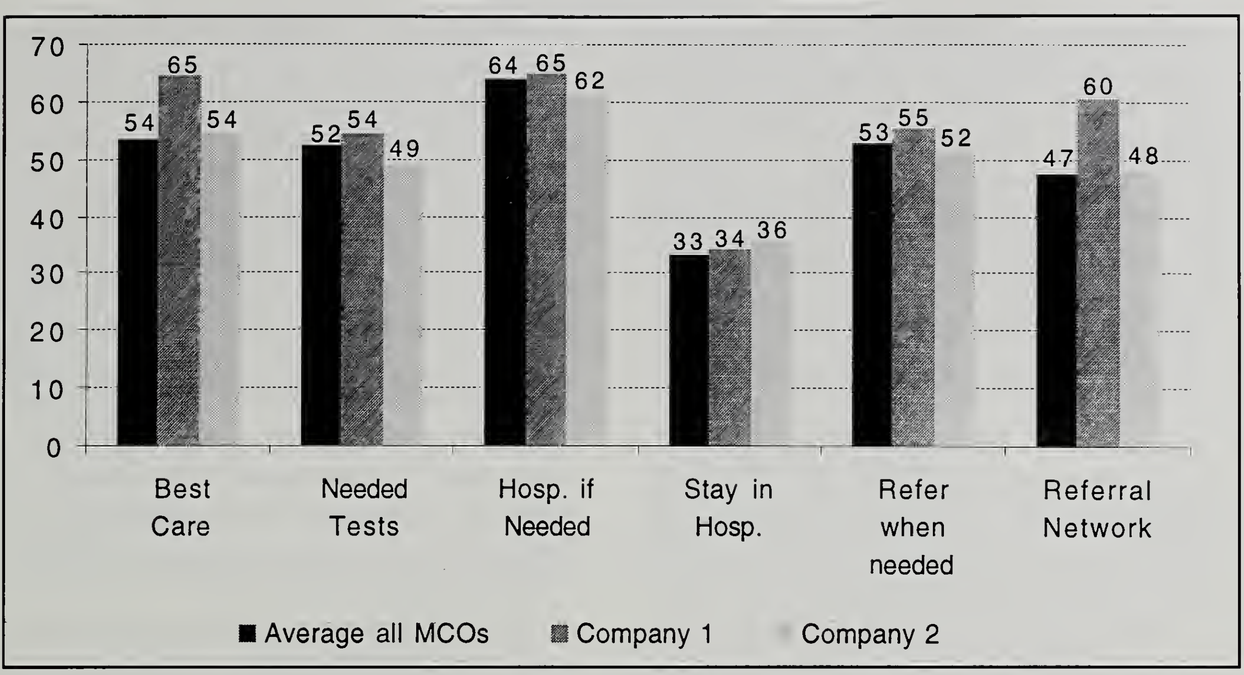

Figure 2. Percent of Respondents Expressing Satisfaction with Plan Characteristics Affecting Patient Care,Top Two Firms versus all Managed Care

Bars show percentage of physicians giving values of 4 or 5 on a 5-point scale, where 5 = "agree" and 1 = "disagree."

Key for bar headings:

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Refer	When I care for patients insured by this organization I can refer patients to specialists when necessary.
Referral network	How satisfied are you with this company's referral network?

could elicit enough information to delineate differences across individual MCOs. Because physician respondents rated 15 different MCOs and because physician response was lower than anticipated, the number of ratings for most companies was quite small. We limited our organization-specific analysis to the two companies rated by the largest number of physicians (Company 1, n=48; Company 2, n=96), which together accounted for 64 percent of the ratings provided. Figure 2 illustrates how these two companies compared to the average of all MCOs on six patient care measures.

Company 1 was rated slightly higher than average on five of six indicators, while Company 2 received higher than average ratings only twice. These minor differences summed to significant differences in willingness to recommend the MCO to others. Physicians rating Company 1 were more likely to recommend it to other physicians than were physicians rating Company 2 (70 percent vs. 50 percent; p=.048). Similarly, physicians were more likely to recommend Company 1 to patients (65 percent vs. 47 percent; p=.030).

To identify factors influencing recommendation decisions among physicians rating these two companies, we ran a logistic regression using the six patient care and two financial variables to predict whether a physician would recommend the company. Because only two companies, with two patient care/financial profiles, were involved in the analysis, discriminating variables should be clearer than was the case when physician ratings for 15 separate firms were analyzed together.

For patient recommendations, four factors were found to make an independent contribution to a positive recommendation decision. Ability to hospitalize patients when necessary was the most influential MCO characteristic (OR 2.14, CI 1.66 - 43.55), followed by a general ability to provide "the best medical care possible" (OR 1.82, CI 1.39 - 27.60) and ability to refer the patient when needed (OR 1.81, CI 1.47 - 25.62). The size of the company's referral network made a smaller independent contribution (OR 1.33, CI 1.17 - 12.34) to the decision.

Three factors contributed to determining whether a physician would recommend one of these two companies to other physicians. The likelihood of a recommendation was increased when respondents perceived that the MCO allowed them to hospitalize patients when necessary (OR 2.28, CI 2.21-43.39), provide the best medical care possible (OR 1.67, CI 1.32 - 20.82), and refer to specialists when necessary (OR 1.35, CI 1.09 - 13.54).

DISCUSSION

Primary care physicians in South Carolina reported that a third of patients in their practices were covered by MCOs using capitation and a "gatekeeper" approach. This level is approximately the same as that in Wisconsin in 1986, when managed care was beginning to grow in that state.[6] Primary care physicians in South Carolina were less satisfied than their Wisconsin peers, however; only 11 percent of physicians were satisfied with managed care as a method of payment, while 52 percent were dissatisfied. Experience may increase satisfaction in South Carolina, as in Wisconsin. However, in Wisconsin, growth took place principally through locally controlled, staff model HMOs; this scenario is unlikely today. Follow-up research will be needed to track physician opinion in South Carolina as MCOs become more common.

Satisfaction with a specific MCO, measured by whether the physician would recommend this organization to patients, stemmed primarily from patient care considerations, such as ability to refer or hospitalize when necessary and an adequate referral network, rather than financial considerations. Patient care issues, including the ability to refer and to hospitalize when needed, also influenced physicians' decisions to recommend an MCO to other physicians. Taken together, these findings suggest that South Carolina primary care physicians view MCOs through the lens of the patient's best interest. Promptness and amount of payment, issues pertinent to the physician alone, did not influence recommendation decisions.

Just over half of respondents would recommend the primary MCO in their practice to their patients (51 percent). This level of endorsement is low, pointing to the need for improvement in MCO product offerings. In a competitive market, complete customer satisfaction should be an organizational goal. MCOs do not appear to have met this goal with physicians, "internal" customers from the standpoint of quality improvement.

Paralleling Borowsky and associates,[9] we found that physician opinion can distinguish among MCOs, and further that this distinction can be made with a brief and focused question list. The speed and efficiency of our approach suggests that physician ratings of MCOs operating in South Carolina could be economically compiled. A comparative assessment of managed care companies from the perspective of primary care physicians would be of benefit to employers, interested in choosing the best alternatives for covered employees; to consumers, when choosing among managed care alternatives; to policymakers, when considering plan characteristics that should or should not be encouraged under insurance regulations; and to other physicians in determining whether to accept contracts with specific MCOs.

Several considerations limit our study's generalizability. First, because managed care has a limited, if increasing, presence in South

Carolina, the perspectives of physicians in this state may not represent those of physicians in other areas. Second, the response rate was low, particularly among internal medicine physicians. Many physicians surveyed may have been subspecialists for whom it was irrelevant. While 86 percent of family physicians in the sample had no other specialty listed, only 49 percent of internal medicine physicians did so. In future work, it would be advisable either to remove physicians with multiple expertise from the sample or provide questions suitable to their interests. Third, half of the physicians who rated individual companies reported that fewer than 10 percent of their patients were covered by that company. Nonrespondents may have been unwilling to rate companies based on limited experience, contributing to the low response rate. Physicians who did not respond may have had different experiences with managed care than those who did. Finally, the study did not address pediatricians, who are significant primary care providers. A follow-up survey, carried out when and if managed care becomes more common statewide and including pediatricians, may achieve both a better response rate and increased generalizability.

Physicians can provide a unique perspective on managed health care plans. Unlike patients, physicians have detailed knowledge of how MCO structures can facilitate or constrain the effective delivery of health care. In this study, 1,102 family medicine, internal medicine and general practice physicians licensed in South Carolina were sent a mail-back survey. Among the 275 respondents' patients, about a third were covered by capitated, gatekeeper managed care plans. Fewer than one in seven physicians were satisfied with the managed care companies they deal with or with managed care in general. Only half would recommend the most prominent MCO in their practice to patients or to other physicians. When deciding whether to recommend an MCO, physicians looked first to patient care considerations, such as ability to provide good care and availability of a substantial referral network. Financial issues affecting the physician, such as promptness or amount of payment, were not influential. We hope that other researchers in the state, as well as policy makers, will use the information reported here to build a physician-based assessment program for monitoring the further development of managed care in South Carolina. ❐

ACKNOWLEDGMENTS

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Editorials

With respect to the following editorial, I disclaim any financial interest in Mission-St. Joseph's Health System, Imatron Corporation, or indeed in any imaging facility.

—CSB

PRIMARY PREVENTION OF MYOCARDIAL INFARCTION: A ROLE FOR ELECTRON BEAM COMPUTED TOMOGRAPHY (EBCT)?

How do you spell relief? Try E-B-C-T.

This story concerns central South Carolina's biggest crock—one Charles Bryan. Having never gotten over the second-year student's propensity to self-diagnose, I'm afraid my serum porcelain level is off the scale. Sunburned cheeks become the first symptom of lupus; a crick in the neck, cervical spinal stenosis; a pulled hamstring, rhabdomyosarcoma; a patch of itchy skin, Hodgkin's disease or mycosis fungoides. But mainly I've lived in morbid fear of coronary disease.

I've seen my father die of it. I've seen most of his close physician friends die of it, one by one. I've seen several of my boyhood friends develop it. At the autopsy table, I've seen hundreds of aortas lined with plaques deserving such adjectives as buttery, hard, calcific, grumous, or ulcerative. I've come to accept coronary disease as the biologic inevitability it probably is.

The story resumes in the summer of 1990 shortly after our beloved president, Dr. J. Gavin Appleby of St. George, died of a heart attack in the early morning after celebrating his 61st birthday. Gavin had ostensibly been in excellent health. Flo, his widow, smiled ironically that "at last I can go back to red meat—I was getting tired of chicken and fish." Gavin's unexpected death offered a grim reminder that one risk factor is to be a South Carolina male.

Bill Hunter and I were talking at Bill's home in Clemson. "Bill," I said, "Gavin's death really disturbs me. I just wanted to say to you, if you haven't already, please get a doctor!" We kept talking until Bill suddenly remembered the horde of patients waiting at his office. When we got there, Bill apologized to his nursing staff: "We've just lost a good friend and it's made us both very nervous."

Both? Wait, Bill, I'm only 48 and in perfect shape—I watch my cholesterol and jog 12 miles a week!

Several weeks later, I did my customary 4-mile jog at the YMCA late one evening. There were a couple of lawyers on the track and I kept lapping them, my Walter Mitty fantasy in high gear ("three laps to go in the 5,000 meters...Bryan nursing a narrow lead...the crowd starting to stir..."). I took a hot shower without cooling down and it felt good, so I lingered. While tightening my tie, it struck: nausea and a cold sweat. I braced for the chest pain and asked one of the lawyers to get me to the emergency room across the street. In the back of the ambulance I composed my final thoughts. The deadline for next month's *Journal* was not among them.

Never mind that the EKG and enzymes were normal. Never mind that a thallium scan done after 15 minutes on the Bruce protocol was normal. Never mind that I got my lipids down even lower than they'd been. I resolved to live as though I had diffuse coronary atherosclerosis. I took aspirin (81 mg b.i.d.), vitamin E (400 units b.i.d.), vitamin C (500 mg daily), and—from time to time—zinc, magnesium, selenium, fish oil, and garlic. Friends who'd had heart attacks reinforced this resolve: "Do everything you can to prevent it."

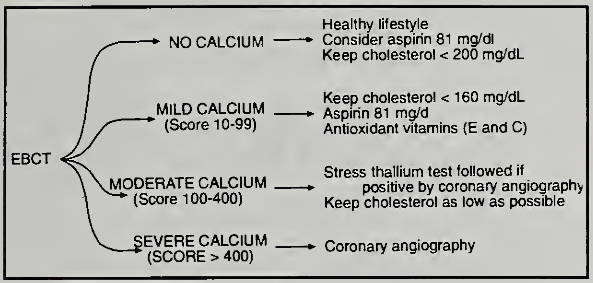
Against this background, I learned last fall of a new method for screening for coronary atherosclerosis known as electron beam computed tomography (EBCT), based on the concept that calcium is a specific marker for atherosclerotic plaque. When the lipid-laden foam cells of the earliest atherosclerotic lesions rupture, they trigger the formation of a complex lesion involving inflammation, necrosis, and calcium deposition. It has been known for many years that calcium deposits seen on plain chest x-rays or fluoroscopy indicate atherosclerosis. EBCT (also known as ultrafast computed tomography) is a rapid, noninvasive, relatively inexpensive, and highly sensitive way to detect smaller quantities of calcium. I learned that EBCT can detect asymptomatic lesions causing no more than 10 percent narrowing of the coronary lumen. It is much more sensitive for the disease than coronary arteriography, which may not show significant lesions (or "angiographic stenosis," to use the jargon) until they cause as much as 50 percent obstruction. But therein lies the catch: Is EBCT *too* sensitive?

I'd been waiting for years for a noninvasive test to tell me whether or not I had the disease. The speaker confirmed that, as an asymptomatic 55-year-old male whose only risk factor was a positive family history, there was a 35 percent pre-test likelihood that EBCT would show the disease. If there was no calcium, all well and good; the negative predictive value would be about 94 percent for absence of angiographic stenosis. If calcium was present, however, the question of angiographic stenosis could not be resolved without catheterization. Thus, a negative scan would relieve my anxiety but a positive scan would raise it unless I went on to arteriography—which could precipitate the familiar "diagnostic cascade" that sometimes ends disastrously. The speaker confided that most physicians elected *not* to have the scan. They'd rather not know. Should I have the test or not?

I weighed the pros and cons for several weeks, torn between conflicting truisms. On the one hand, "The truth will set you free." On the other hand, "Ignorance may not be bliss, but it's close to it." The best advice I got was that when in doubt, honesty—even and especially with oneself—is always the best course. I decided to go for it. From the Internet, *(www.Imatron.com)* I located the nearest scanner: the radiology department at Mission-St. Joseph's Health System in Asheville, North Carolina (704-255-4491). I made the appointment and mapped out a strategy.

If the scan showed extensive calcium, I'd resign my high-stress job, trade in the old Saab for a new Volvo, and set up an irrevocable trust for my heirs. If it showed moderate calcium, I'd ease out of the job, splurge on next summer's vacation, explore getting more disability insurance, and live like a hobbit. If there was no calcium, I'd continue my present job, commit to getting into tip-top physical shape, and plan to hike the Grand Canyon of the Tuolumne River. Whatever the scan showed, I'd be nicer to my fellow humans.

At Mission-St. Joseph I was met by a white-coated technologist named Shirley Lowe. Her graciousness formed the perfect counterpoint to the large sophisticated machine (do these technologists not share equally our claim to the Hippocratic ideal of *philanthropia* and *philotechnia*—love of humanity combined with love of the art?). When I nervously confided to her my self-diagnosis of diffuse calcium, she smiled reassuringly, "Oh I suspect we all have a little!" The whole procedure took about 10 minutes with the crucial scans being made during a single breath-hold. She told me to get dressed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NO CALCIUM
Healthy lifestyle
Consider aspirin 81 mg/dl
Keep cholesterol < 200 mg/dL
MILD CALCIUM (Score 10-99)
Keep cholesterol < 160 mg/dL
Aspirin 81 mg/d
Antioxidant vitamins (E and C)
MODERATE CALCIUM (Score 100-400)
Stress thallium test followed if positive by coronary angiography
Keep cholesterol as low as possible
SEVERE CALCIUM (SCORE > 400)
Coronary angiography

Figure 1. Some recommendations for prevention of myocardial infarction based on results of electron beam computed tomography (EBCT).

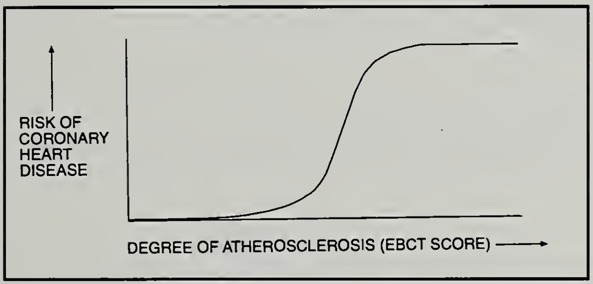

Figure 2. The relationship of the degree of coronary atherosclerosis (plaque burden) as assessed by electron beam computed tomography (EBCT score) to the risk of clinically-apparent coronary disease (events) is sigmoidal rather than linear.

and wait in the lobby while she scored the scan and consulted the radiologist. After a few minutes that seemed like an eternity, Dr. Neil Peterson pronounced the verdict: *zero* calcium!

As a screening test for coronary disease, EBCT seems to me to make a great deal of sense. It is probably more cost-effective than other tests such as treadmill exercise, stress thallium, and stress echocardiography. It would even seem to compare favorably with other things we do in the name of prevention, such as sigmoidoscopies and mammograms. Any cardiologist will tell you that many of his or her patients don't smoke and have normal serum cholesterol levels.

How should the test be used? As I interpret the literature (Figure 1), all of us should minimize such risk factors as smoking, hypertension, inactivity, and high serum cholesterol (greater than 200 mg/dl). If the scan shows calcium, one should certainly take low-dose aspirin. If calcium is moderately extensive, one should try to minimize the formation of large "lipid lakes" by getting one's cholesterol down as low as possible. If calcium is extensive, one should probably undergo coronary arteriography since angioplasty or bypass surgery might well be worth the risk. To be sure, the extent to which the calcium score separates trivial from moderate to significant disease is not entirely clear. However, this information would seem to me to have major implications for primary prevention of myocardial infarction.

An emerging concept is that the relationship of the total quantity of coronary atherosclerosis (that is, the "plaque burden") to the risk of an acute event is non-linear (Figure 2). Current thinking holds that not only plaque size but also plaque stability must be taken into account. Plaques with large necrotic pools of oxidized cholesterol underneath thin fibrous caps are prone to fissuring or ulceration, which exposes their contents to the bloodstream causing thrombotic occlusion of the arterial lumen. Hence "plaque stabilization" is the current shibboleth for prevention of heart attack in patients with established lesions. Data gleaned from EBCT should be powerful motivators for physicians and patients alike to do everything possible to stabilize existing plaques and prevent new ones.

In summary, EBCT would seem to have a clear role in the primary prevention of heart attack. Will my results relieve all my anxiety about heart attack, or—better still—result in permanent lowering of my serum porcelain level? Of course not. Life's a crapshoot and physicians know not to bet against the house. But I certainly wish that this test had been available for Gavin, my Dad, and many other fine people in my life. And I suspect that still-newer imaging techniques combined with genome profiling will raise the next century's preventive medicine to heights we cannot even imagine.

—CSB

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Continuing Medical Education

Second Quarter 1998 Calendar

Melissa Hamby, Director of Education *Stoney A. Abercrombie, MD, Chairperson*

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Note: CME activities in neighboring states are listed when space permits.
Contact the Medical College of Georgia, Division of Continuing Education at 1-800-221-6437 for other activities.

April

Thursday – Friday April 2-3, 1998
Charleston, SC: Embassy Suites Hotel
Sports Medicine Meeting
SPONSOR: Medical University of South Carolina
TARGET AUDIENCE: Primary care physicians, orthopedic surgeons, physician assistants, exercise physiologists
FACULTY: Guest and MUSC Faculty
TUITION: $TBA
CONTACT: Ginny Fields; (803) 792-3446
CREDITS: 9.5 hours, AMA Category 1

Tuesday – Thursday April 14-16, 1998
Greenville, SC: Embassy Suites Hotel
42nd Annual Greenville Postgraduate Seminar, A Primary Care Update
SPONSOR: Greenville Hospital System
DESCRIPTION: Primary care update presenting practical and comprehensive approaches to topics in internal medicine, women's health, geriatrics, and featuring a colposcopy workshop on April 15.
TARGET AUDIENCE: Family practitioners, pediatricians, internists, physician assistants, and nurse practitioners
FACULTY: Michael Pichichero, MD; Thomas Irons, MD; Louis Kuritzky, MD; and others
TUITION: $250 full registration, $125 one day registration, $45 colposcopy workshop
CONTACT: Missy Hathcox; (864) 455-6478
CREDITS: 22 hours, AMA Category

Friday April 17, 1998
Columbia, SC: South Carolina State Museum
3rd Annual Spring Breast
SPONSOR: USC School of Medicine, Richland Memorial Hospital CME Organization
DESCRIPTION: Update in the diagnosis, treatment, and care of breast cancer.
TARGET AUDIENCE: Surgeons, oncologists, radiologists, and others interested in breast health
FACULTY: G. W. (Bill) Eklund, MD, FACOC, President, Society of Breast Imaging
TUITION: $100 physicians, $75 non-physicians
CONTACT: Steven Hasterok; (803) 434-4211
CREDITS: 6.5 hours, AMA Category 1

Thursday – Sunday April 23-26, 1998
Charleston, SC: Charleston Place Hotel
South Carolina Medical Association 150th Annual Meeting and Scientific Assembly
SPONSOR: South Carolina Medical Association
CONTACT: Melissa Hamby; (803) 798-6207 or (800) 327-1021, ext. 253
CREDITS: 12 hours, AMA Category 1

Thursday – Sunday April 23-26, 1998
Charleston, SC: Mills House Hotel
Postgraduate Course in Surgery
SPONSOR: Medical University of South Carolina
DESCRIPTION: Update practicing surgeons on current topics, concepts, issues, and problems relative to the broad field of general surgery.

TARGET AUDIENCE: Practicing surgeons
FACULTY: Guest and MUSC faculty
TUITION: $450
CONTACT: Anne Tokarczyk; (803) 792-9393
CREDITS: 21.5 hours, AMA Category 1

MAY

Saturday-Monday May 23-25, 1998
Kiawah Island, SC: Kiawah Island Resort
Advanced Endoscopy Update at the Beach
SPONSOR: Medical University of South Carolina
DESCRIPTION: To provide the latest information on advanced GI endoscopy techniques and applications.
FACULTY: Guest and MUSC faculty
TARGET AUDIENCE: Gastroenterologists and surgeons
TUITION: $375
CONTACT: Rita Oden; (803) 792-6568
CREDITS: 10.50 hours, AMA Category 1

Wednesday – Saturday May 26-30, 1998
Charleston, SC: Charleston Place Hotel
22nd Annual Update in Cardiology for the Primary Physician During Spoleto 1998
SPONSOR: American College of Cardiology and Medical University of South Carolina
DESCRIPTION: Update primary care physicians
CONTACT: Odessa Ussery; (803) 792-4071
CREDITS: 18 hours, AMA Category 1

Thursday May 28, 1998
Columbia, SC: Sheraton Hotel
2nd Annual Stroke Update
SPONSOR: Medical University of South Carolina
DESCRIPTION: Update primary care physicians and nurses on new methods of evaluation and treatment of stroke.
FACULTY: Guest and MUSC faculty
CONTACT: Pam Missroon; (803) 792-4071

JUNE

Thursday – Saturday June 4-6, 1998
Charleston, SC: Embassy Suites Hotel
1998 Update in Ophthalmology
SPONSOR: Medical University of South Carolina
DESCRIPTION: To update comprehensive and general ophthalmologists with the latest issues in cataract surgery and modern techniques to prevent postoperative complications.
FACULTY: Guest and MUSC faculty
TARGET AUDIENCE: Ophthalmologists
CONTACT: Maddie Manuel; (803) 792-2760

Tuesday – Saturday June 9-13, 1998
Hilton Head, SC: The Westin Resort
Seventh Annual Advanced Cardiovascular Interventions Symposium
SPONSOR: Office of Continuing Medical Education and Alumni Affairs, The School of Medicine, The University of North Carolina at Chapel Hill
TARGET AUDIENCE: Interventional cardiologists, invasive cardiologists, directors of cardiology services, cardiac cath lab managers, and others who are interested in interventional procedures will benefit from attendance at this symposium.
TUITION: $795
CONTACT: Mary Anne Cox; (704) 355-3942 or (800) 874-2417
CREDITS: 18 hours, AMA Category 1

Monday – Friday June 15-19, 1998
Kiawah Island, SC: Kiawah Island Resort
Radiology 2000
SPONSOR: Medical University of South Carolina
FACULTY: Guest and MUSC faculty
TARGET AUDIENCE: Radiologists
CONTACT: Clydie de Brux; (803) 792-4260

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Guest editorials reflect the opinions of the authors and do not necessarily reflect the opinions of the officers and trustees of the South Carolina Medical Association.

—CSB

HEALTH CARE IN THE ERA OF "PANOPTICON"

An old concept of controlling the destiny of people is emerging as a powerful force in today's world. Dating back to an idea conceived by the 18th century English philosopher, Jeremy Bentham, whereupon he envisaged an ideal prison and metaphorically, the tenants of an ideal society. In it, he proposed that the best way to control people is to keep them under constant surveillance,terming the new idea a "panopticon." Gone would be the days of dark, damp dungeons with droves of guards; this building was to be well-lit and needed few shields.

Our present day "global village" is a place where millions of people from around the world are being constantly watched. Moreover, as we enter the 21st century and by utilizing the ever more sophisticated electronic surveillance, the long arm of "panopticon" is reaching many more people with a plethora of detailed information on each soul inhabiting the planet.

Patients, physicians, other health providers, medical schools, and hospitals are special targets of modern world panoptic power. This allows any accessing records to inspect "profile" of any person ranging from the kind of diet he or she eats to the kind of books that an individual reads. From the cradle to the grave, the complete life history of any human being is an open book in a network of information for the whole world to see.

The resulting matrix of government agencies, health maintenance organizations, insurance companies, and managed care created a power that orders patients where to go for medical care, dictates to physicians who to treat or not to treat, and tells hospitals how they should run their businesses.

In the presence of ever increasing size and length of tentacles of the "medical electronic panopticon," the individuals and the society at large have very few choices anymore.

The ideal (prison-society) of Jeremy Bentham is a present-day reality.

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WILLIAM ATMAR SMITH, M.D.—1886-1971

On November 9, 1954, Dr. Leon Banov addressed the Charleston County Medical Society meeting with the following comments:

> ". . .This plaque is being presented tonight as a tangible token of the esteem, love and affection which his professional colleagues bear towards him and is just another palpable testimonial to his warmth of character, his genial friendliness and his very able leadership. . . ."
>
> The plaque presented to Pinehaven Sanatorium reads:
>
> **William Atmar Smith, M.D.**
> **Pioneer in the Control of**
> **Tuberculosis**
> **True Physician and Teacher**
> **Humanitarian**
>
> * * * * *
>
> **In Affection and Esteem**
> **This Tablet was erected during**
> **His Lifetime by His Colleagues**
> **1954**

In a newspaper interview when "Dr. Billy Smith" retired, he was asked his greatest honor. Dr. Smith replied: "Patients usually see the best side of a doctor, but his colleagues know his weaknesses and his faults. For this reason, the presentation of the plaque meant a great deal to me."

Dr. Smith was a founder of Pinehaven Tuberculosis Sanatorium and served as its director from 1925-1955. He guided the institution when there were few tools to work with—fresh air, good food, rest—through the introduction of treatments such as streptomycin. He became chief consultant for the Pinehaven Hospital from 1955-1958 when the tuberculosis treatment facility moved to the new building between Roper Hospital and the Charleston County Health Department. He was associate professor at the medical college, associate visiting physician at Roper Hospital, and a diplomate of the American Board of Internal Medicine. In addition, he served as chairman of the Charleston County Board of Health, president of the Medical Society of South Carolina, a member of the Executive Committee of the National Tuberculosis Society, a trustee of the State Tuberculosis Sanatorium, chairman of the medical committee of the South Carolina Tuberculosis Association, vice-president of the American Trudeau Society (the American Thoracic Society), president of the South Carolina Tuberculosis Conference, the Southern Sanatorium Association, the Southern Tuberculosis Association, the South Carolina Tuberculosis Association as well as the 1943-44 president of the South Carolina Medical Association.

William Atmar Smith was born June 27, 1886, in Summerville and graduated from The Citadel in 1906. He received his doctor of medicine degree from the Medical College of the State of South Carolina in 1910 followed by an internship at Roper Hospital. Dr. Smith entered the Army in 1916 and served overseas as a captain in the medical corps with the 309th Infantry.

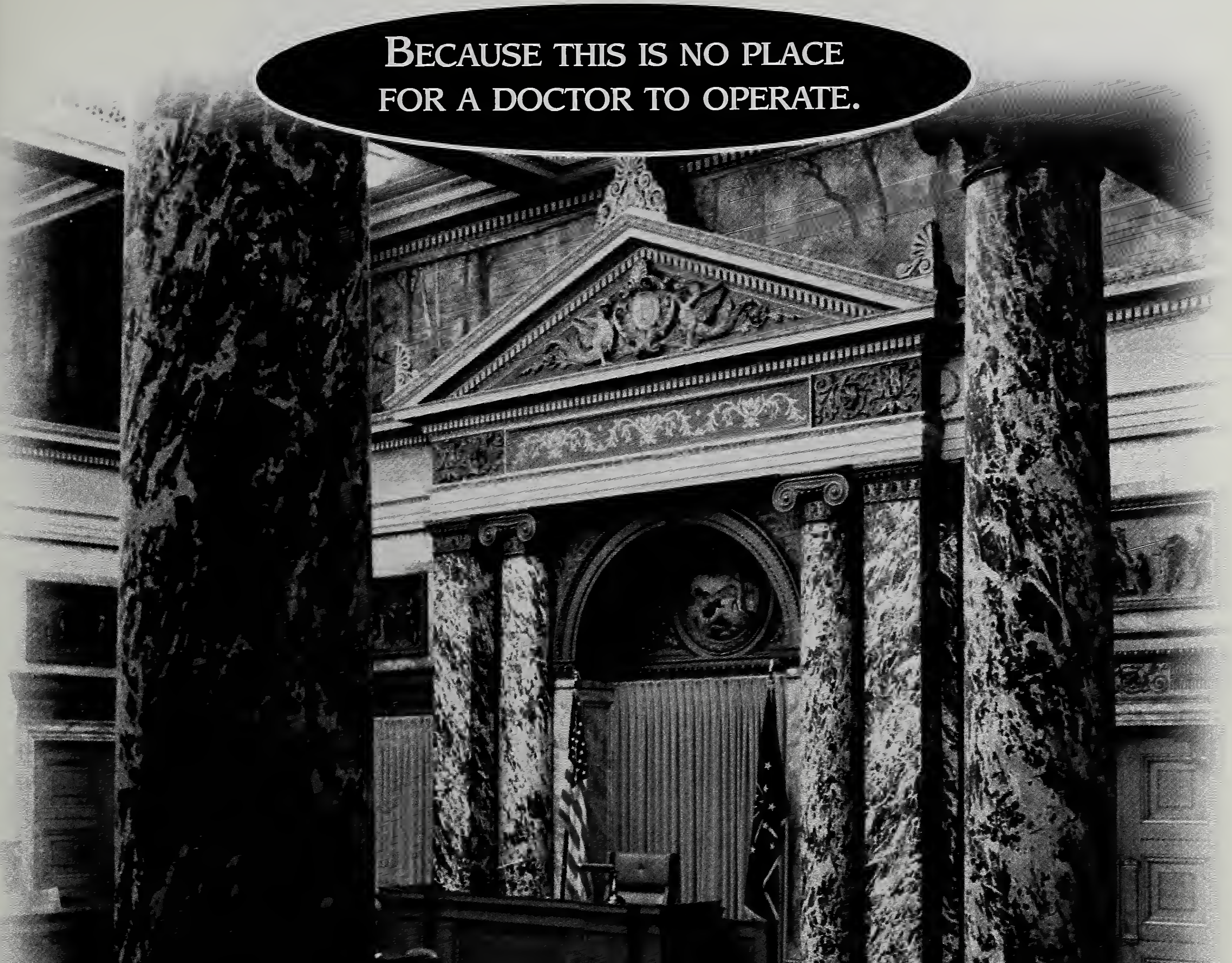
In 1956, 50 years after his graduation from The Citadel, Dr. Smith received an honorary L. L. D. degree from his alma mater. His comment on this occasion to General Mark W. Clark was "I'm afraid that if some of my old Citadel professors should learn about this they would turn over in their graves."

Though he was known among his patients

to be a kindly man, colleagues knew him to be a stubborn opponent when something stood in the way of what "Dr. Billy" believed was right for the healing of the sick and the improvement of medical education. He recalled in an interview when asked about founding Pinehaven Sanatorium: "There was opposition. Older doctors said it was impossible to treat tuberculosis in this climate. But we got amazingly good results and, to their credit, the doctors came around." He voiced strong disapproval of medical care through social security and socialized medicine. He was an equally vocal advocate for a state dental school.

Asked at retirement "What now for 'Dr. Billy'?" Dr. Smith replied, "I have my wife, my children, and my grandchildren—and a closet full of fishing tackle."

Jane McCutchen Brown
Curator, Waring Historical Library



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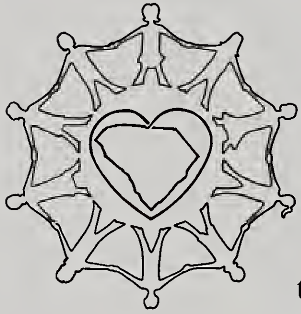

The South Carolina Medical Association Alliance (SCMAA) invites our physician spouses to Convention at the Charleston Place Hotel, April 22 and 23, 1998. We encourage you to attend the SCMAA "Diamond Jubilee." Making the effort to arrive prior to the SCMA Annual Meeting is well worth it. The "Physicians' Spouses Dedicated to the Health of South Carolina" work hard throughout the year. It's time for you to celebrate all we do. Pre-register for your spouse and assist them in arranging the early arrival into Charleston. Then enjoy the weekend with them! On Wednesday, April 22, we hope that you and your spouse will join us at the Gibbes Museum of Art, 135 Meeting Street, for champagne and hors d'oeuvres from 5:00 - 6:30 p.m. You may wander through the exhibits or visit the wonderful gift shop from 5:00 - 6:00 p.m.

Especially for alliance members, on Thursday, April 23, the Executive Board will meet at 9:00 a.m. in the Willow Ballroom followed by brunch at 10:30 a.m. in the Magnolia Ballroon. We will return to the Willow Ballroom for the House of Delegates meeting at 12:30 p.m. Don't miss the county displays during the exhibit walk. We are pleased to announce that Johnnie Amonette, AMA Alliance President, will be our special guest.

The registration center will be located in the SCMAA suite on the sixth floor. Light refreshments will be served and baskets donated by county alliances will be on display prior to the silent auction to benefit American Medical Association Education and Research Foundation (AMA-ERF).

SCMAA pre-registration, prior to April 8, 1998, is required for all events. Hotel reservations should be made directly with Charleston Place at (800) 611-5545. Be sure to request SCMA room rates.

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Gray Matter

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Thornton & Thorne give the medical community something to think about this month.

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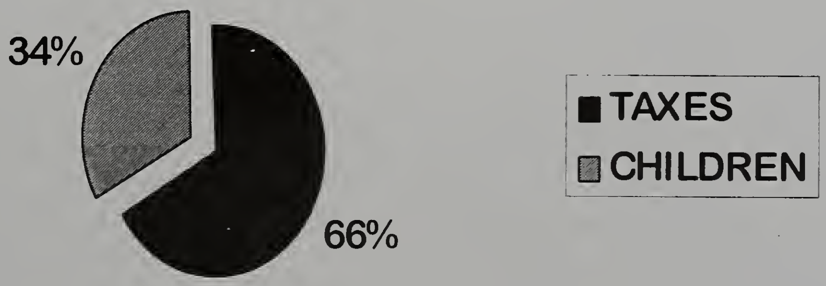

Beginning Plan Balance	**$2,000,000**
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Percent to Children	***34%***

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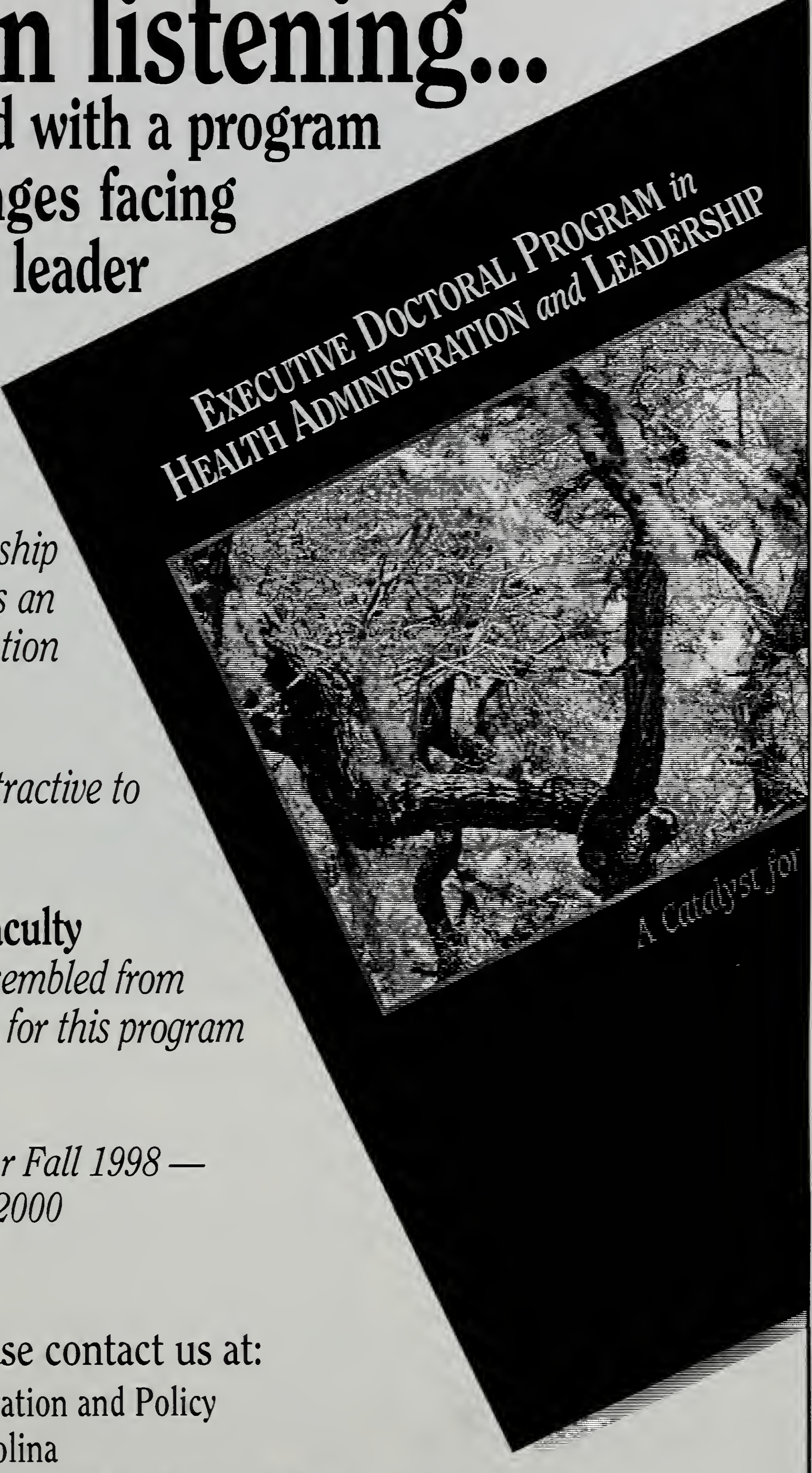

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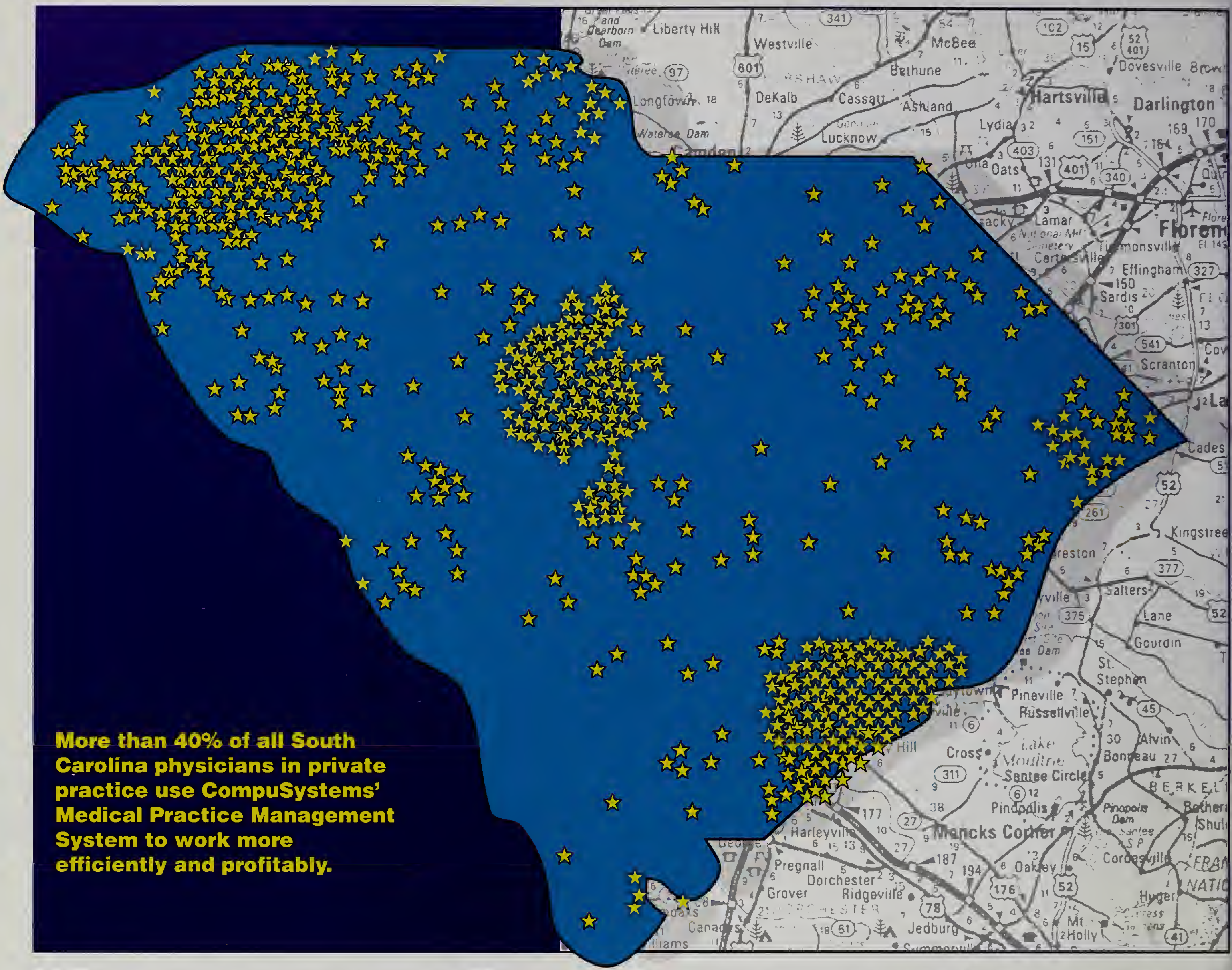

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It might demonstrate how technical expertise brings a host of innovations, starting with the first integrated, direct electronic claims capability in a practice management system.

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APRIL 1998
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THE 150TH ANNUAL MEETING OF THE SCMA
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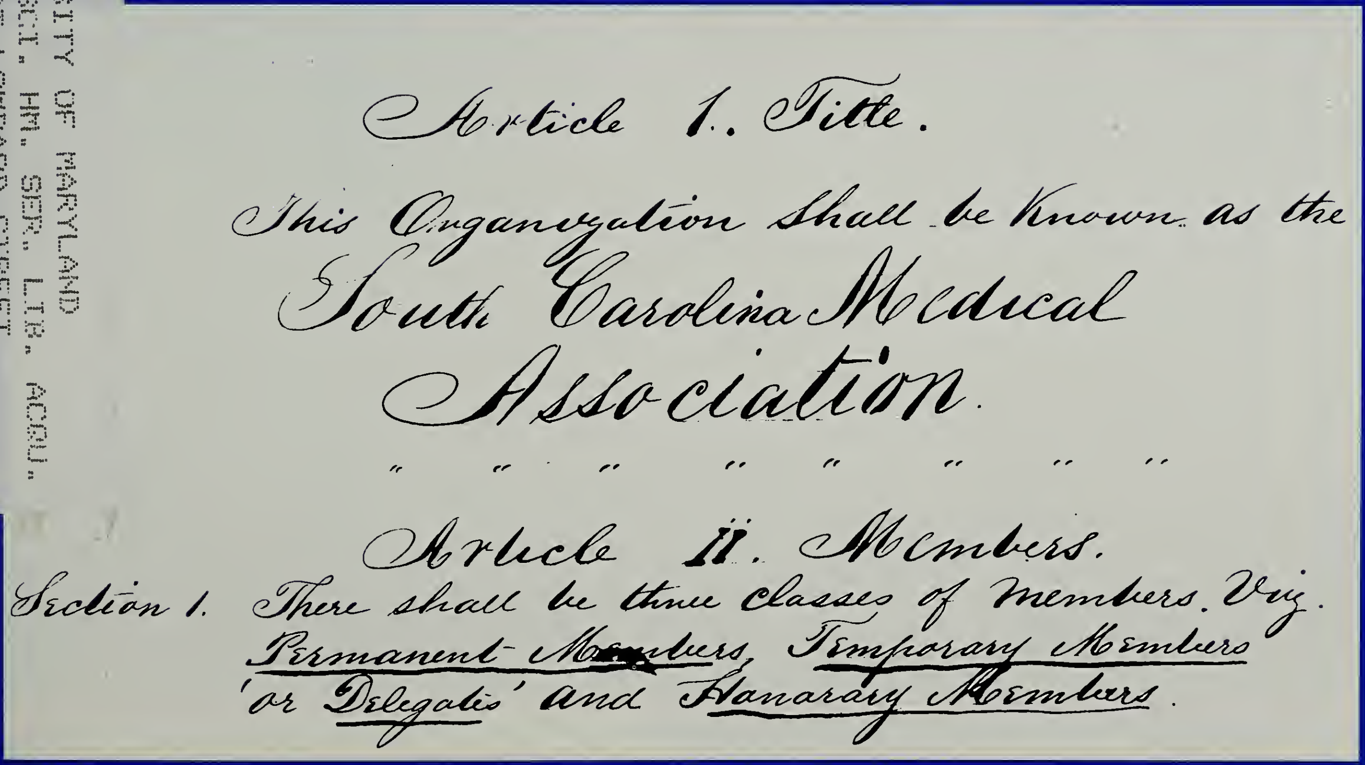

Article I. Title.

This Organization shall be known as the South Carolina Medical Association.

" " " " " " " "

Article II. Members.

Section 1. There shall be three classes of members. Viz. Permanent Members, Temporary Members 'or Delegates' and Honorary Members.

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SCMA NEWSLETTER

A PUBLICATION OF THE SOUTH CAROLINA MEDICAL ASSOCIATION

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Contributions welcome

April 1998

HIGHLIGHTS OF THE MARCH 25 BOARD OF TRUSTEES MEETING

SCMA Strategic Plan: The board approved the general outline of a strategic plan which includes a new mission statement and goals for the association, activities to implement the goals, and proposed changes to the staff structure. The board asked that specific implementation steps be brought back to the them by the Strategic Planning Committee.

Prevention of Asthma: The board approved endorsing a program by Glaxo Wellcome concerning how to prevent asthma symptoms from either complicating life or ending life for citizens of South Carolina.

Family Practice Residency Review Committee: The board approved recommending Palmira S. Snape, MD, of Greenville for a position on the Family Practice Residency Review Committee.

American Group Purchasing: The board approved endorsing American Group Purchasing, a company which provides an array of office products at competitive prices. ❐

MEDICARE UPDATE

Urine Specimen Collection: Effective April 1, 1998, there is a new procedure code for urine specimen collections performed on beneficiaries who are not in a skilled nursing facility. Procedure code Q0162 (catheterization for collection of specimen(s), single patient, all places of service) should be used for all places of service when a single specimen is collected. You should use Q0162 instead of G0002, 53670, or P9610 immediately. The allowance for Q0162 is $5.

The Medicare Carrier's Manual (MCM), section 5114.1(D), describes the circumstances in which a separate fee for a specimen collection may be allowed. Medicare may allow a separate charge for a urine specimen collection when:

1. It is the accepted and prevailing practice among physicians in the locality to make a separate charge for collecting the specimen, and it is the customary practice of the physician performing the services to bill separate charges for them.
2. It must be medically necessary for a physician to obtain the specimen by catheter.
3. If a patient can void normally, there is not usually a medical necessity for a urine collection specimen by catheterization.
4. If a patient uses a catheter for a medical condition, such as urinary retention or incontinence, the urine specimen may be obtained from the existing catheter. The physician would not ordinarily insert another catheter for a specimen collection. Thus, a separate charge for specimen collection would not be paid.
5. When a beneficiary is receiving any cystoscopic procedure, a separate charge for a specimen collection should not be allowed. The specimen is obtained during the course of the procedure.

Physician Supervision in Office Settings: Despite the delay in application of the physician supervision guidelines discussed in the March 1998 *Medicare Advisory*, the key requirement for billing office-based diagnostic

(Continued on page 2)

tests has not changed. In office settings (Place of Service 11), all diagnostic tests and procedures billed to Medicare Part B must be performed "incident to" which requires the PHYSICIAN TO BE PRESENT IN THE OFFICE SUITE and provide at least direct supervision for all services. In fact, the physician must be present during all hours that the clinic is open to Medicare patients. For further information, the most recent discussion of the "incident to" guidelines were printed in the December 1996 *Medicare Advisory*.

Physician Responsibility in Choosing Billing Codes for Medical Procedures: As new medical techniques become available, the issue of how to bill equitably for those services becomes more important. While the CPT instructs providers to "select the name of the procedure that most accurately identifies the service performed," Medicare requires more careful scrutiny. While the name of the procedure may be similar, the relative work required may be quite different. Therefore, the reimbursement may be inappropriate.

When choosing new ways to bill a procedure or when incorporating medical innovations into your practice, you are responsible for billing a procedure code whose name AND relative work under Resource Based Relative Value Scale matches the service performed. In addition, do not fragment services from global procedures (e.g. billing for closing the artery in addition to the cardiac catheterization). Nor should physicians choose codes out of context from their CPT section. Neither manufacturers of devices nor billing consultants will be held liable for false claims to Medicare. It is the physician's responsibility to code correctly.

If there is any question of the appropriate code, bill under an unlisted or miscellaneous code and/or submit the description of the procedure to Medicare for advice on coding the procedure correctly. ❐

SCMA ANNUAL MEETING
APRIL 23-26, 1998
CHARLESTON PLACE HOTEL

As this newsletter goes to press, final plans are under way for the 150th South Carolina Medical Association Annual Meeting and Scientific Assembly. Currently, approximately 265 physicians are preregistered for the meeting. Awards which will be presented during the House of Delegates on Sunday morning include:

1998 Award for Excellence in Medical and Health Care Reporting: *Mr. Bill Burr of WBTW-TV in Florence* is the winner of the broadcast journalism category for his series of reports on breast cancer which provided viewers with vital information on the importance of self-breast exams and mammograms, various treatment options, and coping and recovering from breast cancer. *Mr. John Mantle and Mr. Jason Snyder* are the winners in the print journalism category for their series of articles on stoke which appeared in the *Fort Mill Times*. Their coverage of stroke provided readers with information on symptoms and treatments of stroke as well as recovery outcomes for stroke victims.

1998 Service to the Community Award: *Spartanburg County Medical Society* is this year's winner of the SCMA Service to the Community Award for sponsoring a Women's Expo to educate and inform women in Spartanburg County about women's health issues and health resources currently available to them. The expo also provided a forum for collaboration among health care providers.

SCMA Physician of the Year Award for Community Service: *Lawson William Stoneburner, MD, FACS*, medical director of the Greenville Free Medical Clinic, has been selected as the recipient of the SCMA Physician of the Year Award for Community Service.

See the Schedule of Events in this issue of The Journal *for a complete list of social activities, business meetings, and scientific sessions. Be sure to take time to visit all of our exhibitors before and after meetings and during the coffee breaks. If you are not preregistered, call the SCMA today!*

SCMA WORKSHOPS

BUY, SELL, MERGE, OR HOLD: WHAT TO DO?
MAY 13, 1998

Are you confused about the future direction of your practice? Are you having trouble determining what is your best course of action? This seminar will address some of the complex issues you need to think about in any decision to buy, sell, or merge your practice. Our focus will be on the legal, financial, and practical considerations that are critical in any decision. Our faculty will include health care attorneys, an expert on practice valuation, and a physician who will speak about his personal experience and what can be learned from his experience. **Register by May 1, 1998.**

9:00 a.m. - 4:00 p.m.; Registration: 8:30 a.m.
Columbia, Clarion Town House

PERSONNEL MANAGEMENT FOR MEDICAL OFFICES
MAY 21, 1998

Practice managers find it increasingly difficult to meet the demands of managed care and still continue to find ways to reduce overhead and cut expenses. In addition to these challenges, managers are expected to increase staff efficiency and to ensure patient satisfaction. This workshop is designed to help the manager resolve many of the problems of the day-to-day demands of overseeing the practice and to provide more time and opportunity for attending to those responsibilities that make the staff more efficient, effective, and service-oriented. **Register by May 11, 1998.**

9:00 a.m. - 4:00 p.m.; Registration: 8:30 a.m.
Columbia, Clarion Town House

HEALTH CARE FRAUD AND ABUSE: WHAT YOU NEED TO KNOW TO PROTECT YOUR PRACTICE
MAY 27, 1998

Reports about governmental investigations of hospitals and physicians are now commonplace. In addition, tough new fraud and abuse laws, coupled with increased funding of investigations, have significantly changed the enforcement climate. In this environment, physicians must understand their potential legal exposure and how they can protect themselves and their practices. This program will present an overview of current fraud and abuse laws, a discussion of the kinds of activity that invite scrutiny, and a review of what physicians can do to minimize their exposure. Faculty will include experienced health care attorneys and representatives from the United States Attorney's Office, the South Carolina Attorney General's Office, and Medicare. **Register by May 18, 1998.**

9:00 a.m. - 4:00 p.m.; Registration: 8:30 a.m.
Columbia, Clarion Town House

Space in each program is limited, so be sure to register early. If you have any questions, please call Melissa Hamby, extension 253, at 798-6207 in Columbia, or at (800) 327-1021 statewide, or by e-mail at melissa@scmanet.org. ❒

PHYSICIANS CARE NETWORK UPDATE

Physicians Care Network (PCN) now has 5,892 participating physicians and 615 participating ancillary providers. With the addition of Abbeville County Memorial Hospital effective 2/1/98, there are now 80 participating hospitals.

Don't forget to notify PCN when you have address, group name, or tax ID number changes. Early notification will ensure that there are no claims payment delays.

PRECERTIFICATION PHONE NUMBER CHANGE REMINDER
The phone number for precertification has changed. Please change your information to reflect the new toll-free number as (800) 447-7055.

NEW GROUPS

- Associated Textile Converters, Sumter, effective 2/1/98; Access/Peer Review.
- Columbia Skin Clinic, Columbia; effective 3/1/98; Access/Peer Review.
- Southeastern Iron, Tucker, GA; effective 3/1/98; Access/Peer Review.
- Bailey Financial Corp., Clinton; effective 2/1/98; Access/Peer Review.

If you have questions about PCN, please contact Cindy Osborn, Network Coordinator, PCN, at (803) 798-6207, extension 257 or statewide at (800) 327-1021. You may also send an e-mail message to cindy@scmanet.org.

CODING CONCEPTS

Q. Is there any rule of thumb or printed guidelines to alert the coder to bundling edits?

A. CPT conventions offer a few clues to bundling edits. For instance, codes designated as separate procedures should be used with caution. These codes may be part of another major procedure provided that day. Only bill a separate procedure designated code for the following circumstances:

1. When the separate procedure is the only service or procedure provided that day.
2. When the designated separate procedure is not related to the family of the major procedure.

Coding Concepts is reprinted with permission of Wanda Adams, CPC, Healthcare Consultant and published author. ❒

FREE MEDICAL CLINICS NEED SUPPORT

Free clinics across the state have wish lists for items such as medical equipment, medical supplies, office and medical furniture, paper products, lawn equipment, and computers. The biggest wish of course is for total support from everyone and more volunteers. Donations are always welcomed.

Presently, there are 10 free clinics in the state, with a new clinic soon to open in Camden. *For more information about the free clinics, call Sundie Stone, Administrative Director of the Rosa Clark Medical Clinic Association, Inc., and president of the newly formed South Carolina Free Medical Clinic Association at (864) 882-4664.*

- Anderson Free Clinic: (864) 226-1294
- Charleston Health Care Clinic for the Homeless: (803) 723-9477
- Columbia Free Medical Clinic: (803) 765-1503
- Friendship House Clinic Inc.: (843) 626-7566
- Good Shephard Free Clinic: (864) 938-9177
- Greenville Free Medical Clinic: (864) 232-1470
- Pickens County Free Medical Clinic: (864) 855-7936
- Rosa Clark Medical Clinic Association, Inc.: (864) 882-4664
- St. Lukes Free Medical Clinic: (864) 542-2273
- Volunteers in Medicine Clinic: (803) 681-6612 ❒

MEDICAID UPDATE

Teaching Physician Policy: A Medicaid bulletin dated February 12, 1998, has been mailed to providers concerning the Teaching Physician Policy. Please note that the effective date for adoption will be July 1, 1998, instead of April 1, 1998, as mentioned in the bulletin. *If you have any questions, please contact your program manager in the Department of Physician Services at (803) 253-6134.* ❒

The Journal™
OF THE SOUTH CAROLINA MEDICAL ASSOCIATION

VOLUME 94 APRIL 1998 NUMBER 4

THE ONE HUNDRED FIFTIETH ANNUAL MEETING

THE CHARLESTON PLACE HOTEL
CHARLESTON, SOUTH CAROLINA
APRIL 23 - 26, 1998

The 150th Annual Meeting of the South Carolina Medical Association (SCMA) will mark 18 consecutive years in Charleston and the 12th consecutive year at the Charleston Place Hotel.

Information regarding the meeting, including registration and hotel reservation forms, has been mailed to all South Carolina physicians, but if you have not received this information, call SCMA headquarters in Columbia at 798-6207 or (800) 327-1021 statewide. Again, there is no registration fee for SCMA members, and pre-registration is encouraged.

The House of Delegates meets to consider the business of the association on Friday, April 24, and again on Sunday morning, April 26. Reference Committees will meet on Friday afternoon.

A total of 12 hours of Category 1 credit towards the Physician's Recognition Award of the American Medical Association have been approved by the SCMA beginning on Thursday afternoon and continuing through Saturday afternoon. Consult the Schedule of Events which follows for details on all programs. The shaded areas in the Schedule of Events indicate programs approved for continuing medical education through the SCMA. Each physician should claim only those hours of credit which he or she actually spent in the educational activity.

Our special guest for this Annual Meeting is John C. "Jack" Lewin, M. D., Executive Vice President and Chief Executive Officer of the California Medical Association. He will address the House of Delegates on Friday.

Again this year, the SCMA will serve as the umbrella organization for many specialty societies who will hold business and scientific sessions during the Annual Meeting.

The SCMA Board of Trustees will meet on Thursday, April 23 and at breakfast each day to consider business which arises during the House of Delegates meetings.

he Journal contains only the officer and subsidiary reports available at publication deadline. Additional reports and resolutions will only be included in the delegates' handbooks which will be mailed prior to the meeting. Delegates are asked to bring their handbooks to the meeting or to pass them along to alternate delegates if they are unable to attend.

—ABB

ONE HUNDRED FIFTIETH ANNUAL MEETING
SCHEDULE OF EVENTS

Thursday, April 23, 1998

TIME/LOCATION	EVENT
8:00 a.m.-12:00 noon Sixth Floor	Alliance Registration - Open
9:00 a.m.-10:00 a.m. Willow Ballroom	Alliance Executive Board Meeting
10:30 a.m.-12:00 noon Magnolia Ballroom	Alliance Brunch
11:30 a.m.-7:00 p.m. 2nd Floor Grand Hall	SCMA Registration - Open
12:15 p.m.-1:00 p.m. Charleston Grill	SCMA Board of Trustees Luncheon
12:30 p.m.-4:00 p.m. Willow Ballroom	Alliance House of Delegates
1:00 p.m.-5:00 p.m. Jenkins/King Room	SCMA Board of Trustees Meeting
1:00 p.m.-5:00 p.m. Magnolia Ballroom	SCMA Plenary Session "What's New in..."
1:00-1:20	"AIDS/HIV Update" Michelle Rojas, MD, Columbia, SC
1:20-1:40	"The Role of New Contraceptives" Kathy Bucci, PharmD, Montgomery Center for Family Medicine, Greenwood, SC
1:40-2:00	"Nutritional Medicine" Holly Preble, MUSC, Charleston, SC
2:00-2:15	Question and Answer Session
2:15-2:35	Break
2:35-2:55	"Osteoporosis: Prevention and Treatment" Georgia C. Roane, MD, Charleston, SC

Thursday, April 23, 1998 (continued)

TIME/LOCATION	EVENT
2:55-3:15	"Cerebral Vascular Accident" Breeden Hollis, MD, Greenville, SC
3:15-3:35	"Risk Stratification After Myocardial Infarction" George J. Taylor, MD, MUSC, Charleston, SC
3:35-3:50	Question and Answer Session
3:50-4:10	Break
4:10-4:30	"New Drug Update" C. Wayne Weart, PharmD, MUSC, Charleston, SC
4:30-4:50	"Asthma" Bruce D. Ball, MD, Charleston, SC
4:50-5:00	Question and Answer Session
3:00 p.m.-7:00 p.m. Dogwood/Cypress/Live Oak Ballrooms and Grand Hall	Exhibitors Set Up
6:00 p.m.-8:00 p.m. Magnolia Ballroom	SCMA Young Physicians' Section Business Meeting
8:00 p.m.-9:00 p.m. Roof Garden (Backup: Suite 2H)	SCMA Young Physicians' Section Reception (Supported by SCMA Financial Services)

Friday, April 24, 1998

TIME/LOCATION	EVENT
7:00 a.m.-5:00 p.m. 2nd Floor Grand Hall	SCMA Registration - Open
7:00 a.m.-8:00 a.m. Charleston Grill	SCMA Board of Trustees and Past Presidents' Breakfast
7:00 a.m.-8:00 a.m. Edmunds Room	Interspecialty Council and Specialty Society Delegates Meeting
7:30 a.m.-8:30 a.m. Booths 9 & 65	Coffee/Juice (Supported by BellSouth Advertising and Publishing)

Friday, April 24, 1998 (continued)

TIME/LOCATION	**EVENT**
7:30 a.m.-6:00 p.m. Dogwood/Cypress/Live Oak Ballrooms and Grand Hall	Exhibits Open
8:00 a.m.-11:30 a.m. Willow/Magnolia Ballrooms	SCMA House of Delegates
9:00 a.m.-11:30 a.m. Colleton Room	SC Cardiopulmonary Rehabilitation Association Board of Directors Meeting
9:45 a.m.-10:45 a.m. Booths 9 & 65	Coffee Break (Supported by ACMG)
10:00 a.m.-11:00 a.m. Riley Room	MUSC Medical Alumni Board Meeting
11:00 a.m.-12:30 p.m. 2nd Floor Grand Hall	SC Cardiopulmonary Rehabilitation Association Registration
12:00 noon-1:00 p.m. Riley Room	SC Chapter of the American Academy of Pediatrics Perinatal Section Executive Committee Luncheon
12:00 noon-1:30 p.m. Charleston Grill	SCMA Young Physicians' Section Luncheon & Meeting (Supported by the AMA Young Physicians Section)
12:00 noon-1:30 p.m. Suite 2G	SC Society of Anesthesiologists Executive Committee Meeting
12:30 p.m.-1:30 p.m. Edmunds Room	Reference Committee Chairpersons' Luncheon
12:30 p.m.-2:30 p.m. Drayton Room	SC Psychiatric Association Scientific Session
12:30-1:25	"Pharmacological Management of Dual Disorders" Robert J. Malcolm, MD, MUSC, Charleston, SC
1:25 -1:30	Question and Answer Session

Friday, April 24, 1998 (continued)

TIME/LOCATION	EVENT
1:30-2:25	“ADHD Through the Life Span: A Primer for Primary Care Practitioners” Stephen Cuffe, MD, Columbia, SC
2:25-2:30	Question and Answer Session
12:45 p.m.-5:00 p.m. Magnolia Ballroom	SC Cardiopulmonary Rehabilitation Association Symposium
12:45-1:00	Opening Remarks Barbara Skipper, RN, BSN, President, SC Cardiopulmonary Rehabilitation Association
1:00-1:45	“Physical Activity in the Prevention of Cardiovascular Diseases and All-Cause Mortality” Steven N. Blair, PED, The Cooper Institute for Aerobics Research, Dallas, TX
1:45-2:30	“Cardiac Rehabilitation in the Congestive Heart Failure Patient” M. Donald Alexander, MD, Columbia, SC
2:30-2:45	Break
2:45-3:00	Award Presentation
3:00-3:45	“Comprehensive Risk Reduction Program” Martin J. Sullivan, MD, Duke University Medical Center, Durham, NC
3:45-5:00	Round Tables:
	“Resistance Training in Pulmonary Rehabilitation” David O. Sword, MS, PT, Beaufort Memorial Hospital, Beaufort, SC
	“Alleviation of Work-Related Barriers for the Cardiac Client” Cassandra Townsend, MEd, CRC, LPC, South Carolina Vocational Rehabilitation Department, Moncks Corner, SC
	“Diabetic Management in a Cardiac Rehabilitation Setting” Carl N. King, EdD, FAACVPR, Heart Path Cardiac Rehabilitation Mission/St. Joseph’s Health System, Asheville, NC

Friday, April 24, 1998 (continued)

TIME/LOCATION	EVENT
	"Management of the Pulmonary Patient's Nutritional Needs" Kimberly O. Klenda, RD, Carolinas Hospital System, Florence, SC
	"Is It Time for a Tune-up? The One Maintenance Schedule You Can't Live Without" Jackie Hicks, BS, MEd, EdS, South Carolina Vocational Rehabilitation Department, Lancaster, SC "Smoking Cessation Program for Cardiac Rehabilitation Programs" JoAnn Herman, PhD, RN, USC College of Nursing, Columbia, SC
12:45 p.m.-2:15 p.m. Willow Ballroom	MUSC Alumni Luncheon
1:00 p.m.-3:00 p.m. Beauregard Room	SCMA Seminar: "Advancements in Genetics: Adult and Pediatrics" Robert A. Saul, MD, Greenwood, Genetic Center, Greenwood, SC
1:00 p.m.-4:30 p.m. Suite 2H	SC College of Emergency Physicians Scientific Session and Business Meeting
1:00-2:55	"The Sixth Street Incident" Edward F. Bessman, MD, SAAEM, FACEP, Johns Hopkins Bayview Medical Center, Baltimore, MD
2:55-3:00	Question and Answer Session
3:00-4:30	Business Meeting
1:00 p.m.-4:00 p.m. Suite 2J	SC Chapter of the American Academy of Pediatrics Perinatal Section Scientific Session and Business Meeting
1:00-3:00	Business Meeting
3:00-4:00	"Evaluation and Management of Fetal and Neonatal Arrhythmias" Phil Saul, MD, MUSC, Charleston, SC
1:30 p.m.-3:00 p.m. Hampton, Fenwick and Gadsden Rooms, Suite 2E	SCMA Reference Committee Meetings (Specific room assignments will appear in Delegates Handbook)
2:00 p.m.-4:00 p.m. Suite 2L	SC Society of Otolaryngology Scientific Session: "What's New in ENT?"
2:00-2:15	"Strategies for Evaluating the Dizzy Patient" Peter C. Weber, MD, MUSC, Charleston, SC

Friday, April 24, 1998 (continued)

TIME/LOCATION	EVENT
2:15-2:20	Question and Answer Session
2:20-2:35	"Parameters for Treating Otitis Media in Children or Adults" Jacquelyn A. Going, MD, West Columbia, SC
2:35-2:40	Question and Answer Session
2:40-2:55	"What's New in the Management of Allergic or Vasomotor Rhinitis" Gregory S. Parsons, MD, Rock Hill, SC
2:55-3:00	Question and Answer Session
3:00-3:15	"Strategies for Evaluating the Patient with A Neck Mass" J. David Osguthorpe, MD, MUSC, Charleston, SC
3:15-3:20	Question and Answer Session
3:20-3:35	"What's New in Facial Plastic Surgery" Marcelo Hochman, MD, MUSC, Charleston, SC
3:35-3:40	Question and Answer Session
3:40-3:55	"Approaches to the Patient with Hoarseness" J. Capers Hiott, MD, Sumter, SC
3:55-4:00	Question and Answer Session
2:00 p.m.-4:00 p.m. Colleton Room	SC Chapter of the American Academy of Pediatrics/CRS Combined Scientific Session
2:00-2:10	Introductions T. Dane Pierce, MD, President, SCAAP
2:10-2:50	"Developmental Screening: Why and How?" Desmond P. Kelly, MD, Greenville Hospital System, Greenville, SC
2:50-3:05	Break
3:05-3:45	"An Update on the Management of Epilepsy in Children" Augusto Morales, MD, Greenville Hospital System, Greenville, SC
3:45-4:00	Question and Answer Session

Friday, April 24, 1998 (continued)

TIME/LOCATION	**EVENT**
2:15 p.m.-3:15 p.m. Booths 9 & 65	Coffee Break (Supported by Doctor's Care)
3:00 p.m.-5:00 p.m. Drayton Room	SCMA Plenary Session: "Progress in Digestive Diseases"
3:00-3:30	"What's Happening in Liver Disease" Adrian Reuben, MD, MUSC, Charleston, SC
3:30-3:35	Question and Answer Session
3:35-4:05	"The Future of Gastrointestinal Endoscopy" Robert H. Hawes, MD, MUSC, Charleston, SC
4:05-4:10	Question and Answer Session
4:10-4:20	"The Esophageal Cancer Trial (Sortie)" Marilee Rose, MD, MUSC, Charleston, SC
4:20-4:30	"Familial Adenomatous Polyposis Registry" Judith Green, MD, MUSC, Charleston, SC
4:30-4:50	"Developments in Abdominal Imaging" Clive Kay, MD, MUSC, Charleston, SC
4:50-5:00	Question and Answer Session
3:00 p.m.-5:00 p.m. Edmunds Room	SCMA Workshop: "Changing Careers"
3:00-4:00	"What's New in Physician Stress and Career Adjustment" Donald Saunders, MD, USC School of Medicine, Columbia, SC
4:00-5:00	Question and Answer Session
3:00 p.m.-5:00 p.m. Hampton, Fenwick and Gadsden Rooms	SCMA Reference Committee Meetings (Specific room assignments will appear in Delegates Handbook)
4:00 p.m.-6:00 p.m. Dogwood/Cypress/Live Oak Ballrooms and Grand Hall	SCMA Reception Honoring Delegates, Alternates, Speakers and Exhibitors (All Registrants Welcome) (Partial support provided by NBSC-National Bank of South Carolina)

Friday, April 24, 1998 (continued)

TIME/LOCATION	**EVENT**
5:00 p.m.-7:00 p.m. 2nd Floor Terrace (Backup: Beauregard Room)	USC School of Medicine Alumni and Faculty Reception
5:30 p.m.-7:30 p.m. Suite 2G	SC Chapter of the American Academy of Pediatrics Cocktail Reception
6:30 p.m.-9:00 p.m. Confederate Home	SC Society of Anesthesiologists Reception and Dinner Guest Speaker: Ludwig A. Lettau, MD, Charleston, SC "Cutting Up on the Edge of Medicine"
7:00 p.m.-10:00 p.m. Jenkins/King Room	1943 MUSC Class Reunion
7:30 p.m.-9:00 p.m. The Festival Club	SC Dermatological Association Reception

Saturday, April 25, 1998

TIME/LOCATION	**EVENT**
7:00 a.m.-3:00 p.m. 2nd Floor Grand Hall	SCMA Registration Open
7:30 a.m.-8:30 a.m. Fenwick Room	Editorial Board Breakfast Meeting
7:30 a.m.-8:45 a.m. Suite 2L	SC Society of Anesthesiologists Breakfast Meeting (SCSA Members Only)
7:30 a.m.-8:30 a.m. Ashley Cooper Room	Residents Breakfast Meeting (Supported by the AMA Resident Physicians Section)
7:30 a.m.-8:30 a.m. Charleston Grill	SCMA Board of Trustees Breakfast
7:30 a.m.-9:30 a.m. Booths 9 & 65	Continental Breakfast
7:30 a.m.-8:00 a.m. Gadsden Room	SC Vascular Surgery Society Continental Breakfast
7:30 a.m.-9:00 a.m. Suite 2K	SC Chapter of the American Academy of Pediatrics Executive Committee Meeting

Saturday, April 25, 1998 (continued)

TIME/LOCATION	**EVENT**
7:30 a.m.-12:00 noon Dogwood/Cypress/Live Oak Ballrooms and Grand Hall	Exhibits Open
7:45 a.m.-8:15 a.m. Magnolia Ballroom	SC Dermatological Association Continental Breakfast
8:00 a.m.-10:00 a.m. Suite 2G	Business Meeting and Continental Breakfast of the SC Society of Pathologists
8:00 a.m.-11:00 a.m. Beauregard Room	SC Association of Neurological Surgeons Business Meeting
8:00 a.m.-11:30 a.m. Hampton Room	SC Vascular Surgery Society Scientific Session and Business Meeting
8:00-9:30	Academic Presentations of Society Members
9:30-10:30	"Complications of Endovascular Surgery" Larry H. Hollier, MD, Mount Sinai Medical Center, New York, NY
10:30-11:30	Business Meeting
8:15 a.m.-11:35 a.m. Magnolia Ballroom	SC Dermatological Association Scientific Session
(8:15-10:30)	"Melanoma - Current Concepts in Diagnosis and Treatment"
8:15-8:25	Introduction John C. Maize, MD, MUSC, Charleston, SC
8:25-8:50	"The Role of Sentinel Node Biopsy in the Management of Melanoma" Paul L. Baron, MD, MUSC, Charleston, SC
8:50-9:15	"Treatment of Patients with Advanced Melanoma" Edward F. McClay, MD, MUSC, Charleston, SC
9:15-9:25	Coffee Break
9:25-9:50	"Vaccine Therapy for Melanoma" Sebastiano Gattoni-Celli, MD, MUSC, Charleston, SC

Saturday, April 25, 1998 (continued)

TIME/LOCATION	EVENT
9:50-10:15	"Pitfalls in the Diagnosis and Treatment of Melanoma" John C. Maize, MD, MUSC, Charleston, SC
10:15-10:25	Question and Answer Session
10:25-10:35	Coffee Break
10:35-11:25	"Current Updates in Hair Research" Marty Sawaya, MD, Ocala, FL
11:25-11:35	Question and Answer Session
8:30 a.m.-9:00 a.m. Colleton Room	SC Chapter of the American Academy of Pediatrics Continental Breakfast
8:30 a.m.-11:30 a.m. Drayton Room	SCMA Plenary Session: Cancer Symposium (Support Provided by Hoechst Marion Roussel)
8:30-8:35	Introduction J. David Osguthorpe, MD, MUSC, Charleston, SC
8:35-8:50	"Cancer Risk Assessment in the Community Practice Setting" Karen A. Brooks, MS, CGC, USC School of Medicine, Columbia, SC
8:50-8:55	Question and Answer Session
8:55-9:10	"Combination Therapy Advances for Lung Cancer" Mark Green, MD, MUSC, Charleston, SC
9:10-9:15	Question and Answer Session
9:15-9:30	"Advances in Diagnosis and Therapies for Breast Cancer" Jeffrey K. Giguere, MD, Greenville, SC
9:30-9:35	Question and Answer Session
9:35-9:50	"Improving Outcomes in Prostate Cancer with New Radiotherapy Techniques" Stephen Milito, MD, MUSC, Charleston, SC
9:50-9:55	Question and Answer Session
9:55-10:10	Break

Saturday, April 25, 1998 (continued)

TIME/LOCATION	**EVENT**
10:10-10:25	"Current Trends in the Management of Melanoma" Paul L. Baron, MD, MUSC, Charleston, SC
10:25-10:30	Question and Answer Session
10:30-10:45	"Progress and Promise in Pediatric Oncology" Kevin P. McRedmond, MD, USC School of Medicine, Columbia, SC
10:45-10:50	Question and Answer Session
10:50-11:05	"Latest Trends and Applications for Marrow Transplantation" Jean Hensley-Downey, MD, USC School of Medicine, Columbia, SC
11:05-11:10	Question and Answer Session
11:10-11:25	"Hospice Resources in South Carolina" Marisette Broadney, RN, BSN, Palmetto Hospice, Columbia, SC
11:25-11:30	Question and Answer Session
8:30 a.m.-12:30 p.m. Willow Ballroom	SC Cardiopulmonary Rehabilitation Association Symposium
8:30-9:15	"Critical Elements in a Pulmonary Rehabilitation Program" Mark R. Stout, MS, Lexington Medical Center, West Columbia, SC
9:15-10:00	"AACVPR Program Certification" Carl N. King, EdD, FAACPR, Heart Path Cardiac Rehabilitation Mission/St. Joseph's Health System, Asheville, NC
10:00-10:15	Break
10:15-11:00	Panel Discussion: "Outcomes" "Understanding the Nuts and Bolts of Outcome Measurement" Mark Senn, PhD, FAACPR, SC Heart Center, Columbia, SC; Linda Johnson, RN, Loris Community Hospital, Loris, SC; Cynthia L. MacDonald, MSN, RN, FAACPR, Trident Regional Medical Center, Charleston, SC
11:00-11:45	"Physical Activity: We Must Get Off Our Buts!!" JoAnne Owens-Nauslar, EdD, American School Health Association, Kent, OH
11:45-12:30	Question and Answer Session

Saturday, April 25, 1998 (continued)

TIME/LOCATION	EVENT
8:45 a.m.-12:30 p.m. Jenkins/King Room	SC Society of Anesthesiologists Scientific Session
8:45-9:00	Introductions Susan C. Harvey, MD, First Vice President, SCSA
9:00-9:45	"'Fast Tracking' Cardiac Anesthesia-Is It Appropriate?" Johan Syderhoud, MD, Georgetown University Medical Center, Washington, DC
9:45-10:30	"Updates in Coagulopathy" Gary Haines, MD, MUSC, Charleston, SC
10:30-10:45	Break
10:45-11:30	"'In the Hole': An Anesthesiologist's Perspective on Minimally Invasive Cardiac Surgery" Johan Syderhoud, MD, Georgetown University Medical Center, Washington, DC
11:30-12:15	"Preoperative Cardiac Risk Assessment and Testing for Outpatient Surgery" Andrea R. Williams, MD, MUSC, Charleston, SC
12:15-12:30	Question and Answer Session
9:00 a.m.-11:00 a.m. Suite 2H	SC Orthopaedic Association Business Meeting
9:00 a.m.-12:30 p.m. Suite 2J	SC Society of Physical Medicine and Rehabilitation Scientific Session and Business Meeting
9:00-9:30	Business Meeting
9:30-10:55	"Evaluation of Cognitive Problems Following Traumatic Brain Injury" Scott Barton, PhD, Roper Rehabilitation Hospital, Charleston, SC
10:55-11:00	Question and Answer Session
11:00-12:25	"Nonoperative Management of Low Back Pain" Gregory M. Jones, MD, Charleston, SC

Saturday, April 25, 1998 (continued)

TIME/LOCATION	EVENT
12:25-12:30	Question and Answer Session
9:00 a.m.-12:00 noon Colleton Room	SC Chapter of the American Academy of Pediatrics Scientific Session
9:00-9:45	"Evaluation and Management of Children and Adolescents with Syncope" Phil Saul, MD, MUSC, Charleston, SC
9:45-10:30	"Principles of Judicious Use of Antimicrobial Agents" George S. Kotchmar, Jr., MD, USC School of Medicine, Columbia, SC
10:30-10:45	Break
10:45-11:30	"Daytime Wetting" W. Lane Robson, MD, Greenville Hospital System, Greenville, SC
11:30-12:00	Question and Answer Session
9:30 a.m.-11:00 a.m. Edmunds Room	SOCPAC Board Meeting
10:00 a.m.-11:30 a.m. Riley Room	SCIMER Board Meeting
10:00 a.m.-12:00 noon Suite 2G	SC Society of Pathologists Scientific Session
	"Classical Gliomas" M. Timothy Smith, MD, MUSC, Charleston, SC
10:15 a.m.-11:15 a.m. Booths 9 & 65	Coffee Break
12:00 noon-1:30 p.m. Magnolia Ballroom	SC Dermatological Association Luncheon and Scientific Session (SCDA Members Only) (Supported by Janssen Pharmaceutica)
	"Practical Management of Aging Skin" Nellie Konnikov, MD, Boston, MA
	Questions and Answer Session

Saturday, April 25, 1998 (continued)

TIME/LOCATION	**EVENT**
12:00 noon-2:00 p.m. Suite 2L	SC Orthopaedic Association Physical Therapy Symposium
12:00-12:15	"Cervical Spine" Willie S. Edwards, Jr., MD, Florence, SC
12:15-12:20	Question and Answer Session
12:20-12:35	"Lumbar Spine" Donald R. Johnson, III, MD, Mount Pleasant, SC
12:35-12:40	Question and Answer Session
12:40-12:55	"Foot" Robert H. Belding, MD, Columbia, SC
12:55-1:00	Question and Answer Session
1:00-1:15	"Knee" S. Wendell Holmes, Jr., MD, Columbia, SC
1:15-1:20	Question and Answer Session
1:20-1:35	"Upper Extremity" James J. Hill, Jr., MD, Aiken, SC
1:35-1:40	Question and Answer Session
1:40-1:55	"Shoulder" Sidney Martin, MD, Florence, SC
1:55-2:00	Question and Answer Session
6:30 p.m. - 7:00 p.m. Live Oak Ballroom	Presidential Inauguration Ceremony
7:00 p.m.-8:00 p.m. Magnolia/Willow Ballrooms	SCMA Presidents' Gala Reception (Supported by Carolina Physicians Advisory Service)

Sunday, April 26, 1998

TIME/LOCATION	EVENT
7:00 a.m.-10:30 a.m. 2nd Floor Grand Hall	SCMA Registration Open
7:30 a.m.-8:30 a.m. Charleston Grill	SCMA Board of Trustees Breakfast
8:30 a.m.-12:30 p.m. Dogwood/Cypress/Live Oak Ballrooms	SCMA House of Delegates
12:30 p.m.-1:00 p.m. Colleton Room	SCMA Board of Trustees Reorganization Meeting

The South Carolina Medical Association is accredited by the American Council for Continuing Medical Education (ACCME) to sponsor continuing medical education for physicians.

The South Carolina Medical Association adheres to the ACCME standards regarding industry support of CME in disclosure of faculty and commercial support relationships. This information will be contained in the final program and reported at each session.

The 1998 Scientific Assembly is designed for South Carolina physicians from all specialties.

LEARNING OBJECTIVES FOR SCIENTIFIC SESSIONS

Under each session name is a listing of objectives that each attendee should be able to achieve at the end of the specific session.

"AIDS/HIV Update"
- Outline the major differences between the various classes of antiretroviral agents.
- Apply the information given on viral lode measurements to modify patient treatment protocol.

"The Role of New Contraceptives"
- Outline the proposed advantages of the newer progestins (e.g. norgestimate, desogestrel).
- Compare and contrast new oral contraceptive products (e.g. Alesse, Estro-Step) with other currently available formulations.
- Recognize the new indication(s) for selected oral contraceptives (e.g. Ortho-Tricyclen for acne and regimens declared safe and effective for "emergency contraception").

"Nutritional Medicine"
- Recognize the concept of overfeeding.
- Evaluate the use of enteral formula.
- Recognize the benefits of enteral over parenteral nutrition.

"Osteoporosis: Prevention and Treatment"
- Recognize the risk factors for osteoporosis.
- Diagnose and treat osteoporosis.
- Prescribe preventative measures for osteoporosis.

"Cerebral Vascular Accident"
- Recognize the basic types of strokes.
- Discuss the epidemiology of strokes.
- Diagnose strokes.
- Prescribe treatment for strokes.
- Discuss the use of TPA.

"Risk Stratification after Myocardial Infarction"
- Recognize high risk patients who should have early coronary augiography.
- Discuss an assessment of prognosis with patients and families.
- Prescribe proper treatment for patients after myocardial infarction.

"New Drug Update"
- Describe the potential benefits and risks of the significant new drugs.
- Evaluate the potential clinical use of these agents with existing agents.

"Asthma"
- Discuss the risks of undertreatment of asthma.
- Discuss the new pharmacologic therapies and their current place in therapy.

"Pharmacological Management of Dual Disorders"
- Discuss medication management in the treatment of patients with substance abuse and primary psychiatric diseases.

"ADHD Through the Life Span: A Primer for Primary Care Practitioners"
- Recognize the symptoms of ADHD.
- Recognize the way ADHD symptoms may change over time.
- Perform an evaluation for ADHD.
- Discuss the comorbid conditions commonly seen in ADHD patients.
- Outline the basic treatments available to treat ADHD.

"Advancements in Genetics: Adult and Pediatrics"
- Discuss the purpose and scope of the Human Genome Project and the resultant genetic technologies.
- Recognize the strengths and limitations of genetic testing and counseling for childhood and adult cancer.
- Recognize the ethical, legal, and social implications of the "genetics revolution."

"The Sixth Street Incident"
- Discuss the basic concepts of urban search and rescue.
- Discuss the basic concepts of the Incident Command System and Federal Disaster Response.
- Describe the basic concepts of confined space medicine and the recognition and treatment of muscle crush syndrome.

"Strategies for Evaluating the Dizzy Patient"
- Differentiate between labyrinthitis, BPPV, and Meniere's disease.
- Discuss the basic prescription principles for labyrinthitis, BPPV, and Meniere's disease.
- Discuss the role of vestibular rehabilitation for

the dizzy patient.

"Parameters for Treating Otitis Media in Children or Adults"

- Discuss the guidelines for the evaluation and treatment of Otitis Media in children and adults, both medically and surgically.

"What's New in the Management of Allergic or Vasomotor Rhinitis"

- Evaluate the patient who presents rhinitis.
- Assess the patient's history and physical findings and formulate a treatment plan.
- Recognize the new evaluation and treatment methods that are currently available.
- Recognize when to seek ENT or allergy referrals for the rhinitis patient.

"Strategies for Evaluating the Patient with a Neck Mass"

- Recognize the likelihood of various congenital infectious and neoplastic entities causing significant cervical adenopathy and describe a diagnostic approach suitable to each.

"What's New in Facial Plastic Surgery"

- Discuss the latest advances in facial plastic surgery.

"Approaches to the Patient with Hoarseness"

- Evaluate the patient with hoarseness by appropriate history and physical exam.
- Treat certain patients with hoarseness.
- Recognize when to refer patients for further diagnostic work-up to include such things as direct laryngoscopic examination and possible biopsies.

"Developmental Screening: Why and How?"

- Recognize the importance of early detection of developmental problems in infants and young children.
- List reliable and efficient methods of screening development in children being seen for routine office visits.

"An Update on the Management of Epilepsy in Children"

- Diagnose the signs and symptoms of epilepsy and seizures, and list the standard treatment approaches.
- Discuss the new medications and treatments for epilepsy including the indications for these treatments, potential benefits, and side effects.

"What's Happening in Liver Disease"

- Outline new developments in the diagnosis and management of patients with liver disease.

"The Future of Gastrointestinal Endoscopy"

- Assess the potential developments in the field of gastrointestinal endoscopy.

"The Esophageal Cancer Trial (Sortie)"

- Assess the eligibility of patients for trials in esophageal cancer.

"Familial Adenomatous Polyposis Registry"

- Recognize the value of screening for colon cancer and familial adenomatous polyposis.

"Developments in Abdominal Imaging"

- Discuss new developments in abdominal imaging.

"Changing Careers"

"What's New in Physician Stress and Career Adjustment"

- Recognize causes of stress.
- Recognize symptoms of burnout.
- Recognize the need to begin to take care of oneself as well as others.
- Recognize the need for "safe space" to discuss personal needs.

"Complications of Endovascular Surgery"

- Identify patients who are suitable candidates for endovascular repair of aneurysms.
- Outline the major potential risks associated with endovascular surgery.

" 'Fast Tracking Cardiac Anesthesia—Is It Appropriate?' "

- Recognize the differences between conventional and fast track anesthetic regiments.
- Outline some of the physiological consequences of both techniques.
- Evaluate the outcome data that has been presented so far.
- Recognize the economic/utilization issues surrounding this debate.

"Updates in Coagulopathy"

- Discuss the latest advances in coagulopathy.

" 'In the Hole': An Anesthesiologist's Perspective on Minimally Invasive Cardiac Surgery"

- Discuss the various surgical approaches to minimally invasive cardiac surgery and their anesthetic implications.
- Outline some of the anesthetic techniques

unique to these types of surgeries.

- Discuss these new techniques compared to conventional approaches and what their outcomes have been to date.
- Discuss what our clinical practice will be in the next decade and beyond.

"Preoperative Cardiac Risk Assessment and Testing for Outpatient Surgery"

- Assess the risk of developing myocardial ischemia based upon cardiovascular testing and clinical history.
- Evaluate the necessity for further cardiac testing—which tests and how predictive these tests are for cardiac events.
- Discuss the predictive value of cardiac testing versus cost.

"Cancer Risk Assessment in the Community Practice Setting"

- Elicit a cancer-sensitive family history.
- Recognize patients/families who would benefit from cancer genetic counseling and risk assessment.
- Outline potential benefits and limitations of DNA testing for cancer predisposition.

"Combination Therapy Advances for Lung Cancer"

- Recognize that using chemotherapy combined with radiation in the management of patients with stage III non-small cell lung cancer is associated with an improvement in survival compared to radiation alone.
- Discuss the new investigations that are being carried out to try to further improve combined modality treatment for these patients.

"Advances in Diagnosis and Therapies for Breast Cancer"

- Systematically evaluate a breast mass both radiographically and diagnostically.
- Outline new treatment options to include the following: hormonal therapies, new chemotherapeutic agents, and monoclonal antibodies.
- Outline potential breast cancer prevention methods.

"Improving Outcomes in Prostate Cancer with New Radiotherapy Techniques"

- Evaluate the treatment options available to patients with prostate cancer.
- Discuss the role of emerging new radiotherapy techniques.

"Current Trends in the Management of Melanoma"

- Recognize the indications for wide excisions of melanoma.
- Discuss the principle and goals of lymphatic mapping/sentinel node biopsy.

"Progress and Promise in Pediatric Oncology"

- Outline general issues in regard to current therapy of acute myeloid leukemia and brain tumors.
- Recognize the causative factors for the recent advances in improving the prognosis in patients with myeloid leukemia and brain tumors.

"Latest Trends and Applications for Marrow Transplantation"

- Recognize the disease indications for allogeneic marrow transplantation.
- Outline the donor options for patients without a matched sibling donor.
- Discuss the major risks and complications associated with allogeneic bone marrow transplantation and current therapeutic interventions.

"Hospice Resources in South Carolina"

- Differentiate the key components of hospice care versus home health care.
- Recognize the benefits terminally ill patients receive when eligible for various hospice benefit plans such as Medicare and Medicaid.
- Describe the factors which must be present to ensure a smooth transition to hospice care.

"Evaluation of Cognitive Problems Following Traumatic Brain Injury"

- Describe what neuropsychological assessment is and its role in the rehabilitation of traumatic brain injury patients.
- Describe the most common neuropsychological sequelae of traumatic brain injury.
- Recognize tools physicians can use to assess traumatic brain injury patients and interventions that can speed recovery.

"Nonoperative Management of Low Back Pain"

- Identify major diagnoses affecting spine.
- Delineate appropriate use of diagnostic procedures for spinal disorders.
- Recognize when to order diagnostic/therapeutic

spinal injection procedures.

- Demonstrate a basic understanding of electromyography.
- Outline referral guidelines to various spine specialists.
- Recognize when to opt for surgical versus nonsurgical management in lumbar spine disorders.

"Evaluation and Management of Children and Adolescents with Syncope"

- Recognize the signs and symptoms which differentiate the malignant and the benign causes of syncope.
- Describe the mechanisms which underlie the most common causes of syncope.
- Outline the non-pharmacologic and pharmacologic approaches to the management of vasovagal syncope.
- Identify the connection between vasovagal syncope and chronic fatigue syndrome.

"Principles of Judicious Use of Antimicrobial Agents"

- Recognize the burgeoning community problem involving the emergence of antibiotic resistant bacteria, especially disease processes involving Streptococcus pneumoniae.
- Discuss "The Cause" (Careful Antibiotic Use to Prevent Resistance)—national, state, and community campaigns (including the American Academy of Pediatrics, Center for Disease Control and Prevention, American Society for Microbiology, and Department of Environmental Control) delivering intervention programs focusing on educating medical care providers, parents, and patients about when antibiotics are needed and when they are not.
- List the Center for Disease Control's "principles of judicious use of antimicrobial agents" as they apply to the common cold, acute sinusitis, Cough illness/bronchitis, pharyngitis, and otitis media.
- Discuss how to best accomplish physician peer education and what specific actions can be adopted to stop the spread of bacterial resistance, including how to best educate parents/patients.

"Daytime Wetting"

- Recognize the causes for daytime wetting in a child.
- Recognize the importance of a thorough history to establish the cause of daytime wetting and to minimize the need for invasive investigations.
- Recognize the clinical presentation of urge syndrome (unstable bladder) and list the management principles for this problem.

"Classical Gliomas"

- Discuss the origin and history of the classification of gliomas.
- Outline the grading system(s) for gliomas.
- Identify the basic patterns of gliomas required for diagnosis.

"Physical Therapy Symposium"

- Write appropriate prescriptions for physical therapy for all patients with musculoskeletal problems.

1998 DELEGATES AND ALTERNATES

County Societies

ABBEVILLE	Albert G. Oliver, MD
AIKEN	Richard S. Chesser, MD
	Wayne G. Entrekin, MD
	Wayne T. Frei, MD
	William A. Jackson, MD
	J. Douglas Quarles, Jr., MD
	Timothy J. Shannon, MD
Alternates:	Jonathan C. Collins, MD
	Mark J. Meiler, MD
ALLENDALE	Lori C. Ksander, MD
ANDERSON	Not available at press time
BAMBERG	Not available at press time
BARNWELL	Not available at press time
BEAUFORT	Richard E. Akers, II, MD
	Paul Mazzeo, MD
	Baxter F. McLendon, III, MD
	H. Timberlake Pearce, Jr., MD
	Douglas J. Thompson, MD
	Ralph Erskine Moore, III, MD
Alternates:	Robert E. Bell, MD
	Scott D. Condie, MD
	T. Robert Rhodin, MD
	Leland C. Stoddard, Jr., MD
	Gary A. Thompson, MD
BERKELEY	Not available at press time
CHARLESTON	Warren Y. Adkins, MD
	Charles S. Andrus, MD
	Thomas C. Appleby, MD
	Mary E. Baker, MD
	Paul L. Baron, MD
	Carroll S. Brown, MD
	Gene Elizabeth Burges, MD
	Joanne M. Conroy, MD
	Jeffrey J. Dorociak, MD
	Lydia A. Engelhardt, MD
	Robert W. Fitts, MD
	John E. Franklin, MD
	Waddell H. Gilmore, MD
	John M. Graham, MD
	David M. Habib, MD
	Barry L. Hainer, MD
	Gene R. Howard, MD
	D. Michael Hull, MD
	Donald R. Johnson, MD
	Patrick J. Kelly, MD
	Clarence W. Legerton, III, MD
	I. Grier Linton, Jr., MD
	G.T. Little, MD
	Stephen McLeod-Bryant, MD
	Edward C. Morrison, MD
	Baird D. Oldfield, MD
	Rex G. Quigley, MD
	William M. Rambo, MD
	Allan A. Rashford, MD
	Stephen E. Rawe, MD
	Samuel H. Rosen, MD
	Rudolph B. Rustin, MD
	Eugene D. Rutland, Jr., MD
	Graham C. Scott, MD
	Steven D. Shapiro, MD
	Ralph M. Shealy, MD
	Richard M. Silver, MD
	Robert M. Steinberg, MD
	William H. Stroud, Jr., MD
	Susan B. Tate, MD
	Mike O. Tyler, MD
	Henry C. West, MD
	G. Frederick Worsham, MD
Alternates:	Lawrence Afrin, MD
	Rebecca G. Baird, MD
	Angus S. Baker, MD
	J. Gilbert Baldwin, MD
	Lisa A. Baron, MD
	Ettaleah C. Bluestein, MD
	Alton G. Brown, MD
	Chris Y. Brunson, MD
	Robert W. Cain, MD
	Peter J. Carek, MD
	Deanna E. Cheek, MD
	Sandra E. Conradi, MD
	Brian G. Cuddy, MD
	John P. Davis, Jr., MD
	Paul M. Deaton, Jr., MD
	George B. DelPorto, MD
	Kenneth A. Dodds, MD
	Winslow P. Engel, MD
	James A.L. Glenn, MD
	Philip L. Goolsby, MD
	Leonie Gordon, MD
	Ronald P. Hargrave, MD
	Russell A. Harley, MD
	R. Marshall Hay, MD
	Richard C. Holgate, MD
	Carium Joseph, MD
	Jeffrey R. Joyner, MD
	Gary F. Kuhns, MD
	John C. Kulze, II, MD
	Keith W. Lackey, MD

	Pearon G. Lang, MD
	William H. Lee, MD
	Robert F. Marion, Jr., MD
	William H. Marsh, MD
	Daniel E. Mengedoht, MD
	Marjorie M. Mengedoht, MD
	S. Scott Miller, MD
	Sunil J. Patel, MD
	Sandra L. Powell, MD
	Laurence L. Raney, MD
	Adrian Reuben, MD
	Georgia C. Roane, MD
	Peter W. Rossi, MD
	Steven J. Taylor, MD
	Karen M. Ullian, MD
	Timothy E. West, MD
CHEROKEE	No Delegate
CHESTER	Rhett H. Hasell, MD
	Samuel R. Stone, MD
Alternate:	Edwin C. Hentz, MD
CHESTERFIELD	Not available at press time
COLLETON	J. Frank Biggers, III, MD
Alternate:	Jeffrey R. Kramer, MD
COLUMBIA	Joseph Albert, Jr., MD
	Myron Bell, MD
	Eloise A.Bradham, MD
	Stacy V. Brennan, MD
	Charles S. Bryan, MD
	William Cain, Jr., MD
	C. Guy Castles, III, MD
	Myles D. Davis, MD
	Vincent J. Degenhart, MD
	Alexander G. Donald, MD
	Kathleen P. Flint-Moon, MD
	Lilly S. Filler, MD
	Jeffrey G. Gross, MD
	Thomas E. Hearon, III, MD
	Richard M. Helman, MD
	R. Brian Huff, MD
	Leroy J. Huffman, MD
	R. Gregory Jowers, MD
	Edward E. Kimbrough, MD
	Lawrence E. Klein, MD
	David E. Koon, MD
	Robert Malanuk, MD
	M.F. McFarland, III, MD
	Robert N. Milling, MD
	Jane Stewart Rawl, MD
	James C. Reynolds, MD
	Mark H. Salley, MD
	John P. Sutton, III, MD
	C. Alden Sweatman, MD
	Nguyen D. Thieu, MD
	Dennis A. Wilson, MD
DARLINGTON	Not available at press time
DILLON	David A. Howell, MD
Alternate:	Susanne L. Black, MD
DORCHESTER	Walter Levinthal, MD
	James D. Spearman, MD
	Ernest L. Zinkowski, MD
Alternate:	Kathleen R.Malaney, MD
EDISTO-ORANGEB	Not available at press time
FAIRFIELD	Not available at press time
FLORENCE	Not available at press time
GEORGETOWN	Walter L. Frank, MD
	Charles D. Garner, MD
	Mary Ann Haden, MD
	Kent M. McGinley, MD
GREENVILLE	Eric J. Baker, MD
	Darwin R. Boor, MD
	J. Duncan Burnette, Jr., MD
	Brian G. Burnikel, MD
	Glen G. Daves, MD
	Charles R. Duncan, Jr., MD
	John B. Eberly, MD
	Raymond V. Grubbs, MD
	Lyn H. Hammond, MD
	Lloyd E. Hayes, MD
	William B. Jones, MD
	Jeffrey G. Lawson, MD
	J. Rutledge Lawson, MD
	Woodrow W. Long, Jr., MD
	Joseph C. McAlhany, Jr., MD
	Patrick B. Mullen, MD
	James B. Page, MD
	Thomas M. Roesch, MD
	John R. Sanders, MD
	Palmira S. Snape, MD
	Bruce A. Snyder, MD
	Eric H. Troutman, MD
	Donald R. Vaughan, MD
	John H. Wentzky, Jr., MD
	Patricia P. Westmoreland, MD
	D. Bryan Worthington, MD
Alternate:	Jesse R. Stafford, MD
GREENWOOD	Stoney A. Abercrombie, MD
	Richard M. Carter, MD
	Dennis J. Doud, MD
	Pete Parramore, MD
HAMPTON	Not available at press time
HORRY	Patrick J. Cawley, MD

Joseph J. Davey, MD
Alexander C. Logan, III, MD
John T. Molnar, Jr, MD
Richard A. Schmitt, MD
Eric R. Senn, MD
Asbury H. Williams, MD
Alternates: Marc P. Binard, MD
Robert S. Purvis, MD
James D. Schweigert, MD
Jeffrey C. Wilkins, MD
Eston E. Williams, Jr., MD
JASPER Not available at press time
KERSHAW John R. Burchfield, MD
Renee B. Thomas, MD
Alternates: Alice J. Brooks, MD
Donald J. Copley, MD
Yaz Kuzbary, MD
LANCASTER Andrew J. Pate, MD
Douglas L. Tiedt, MD
LAURENS Thomas O. Klauber, MD
Bruce A. Marshall, MD
Alternates: Holbrook W. Raynal, MD
Brian E. Weirick, MD
LEXINGTON Mark A. Adams, MD
G. Michael Beaver, MD
Thomas E. Gibbons, Jr., MD
Leon Bullard, MD
George Tripp Jones, MD
MARION Paul V. DeMarco, MD
James S. Garner, IV, MD
Alternates: Hugh Coleman, MD
Ganga Mathi, MD
MARLBORO Not available at press time
NEWBERRY Not available at press time
OCONEE Edward H. Booker, MD
James R. Pruitt, MD
S.A. Rampey, MD
Alternates: Terence M. Clark, MD
Kent B. Sizemore, MD
William W. Turton, Jr., MD
PICKENS Steven Acres, MD
Richard A. Banks, Jr., MD
Jake K. Holcombe, MD
Lawrence E. Stroud, Jr., MD
Robert C. Waters, MD
Alternates: Sandra W. Lamberson, MD
RIDGE - B.E. Nicholson, MD
Alternate: W. Hugh Morgan, MD
SPARTANBURG Sami B. Elhassani, MD
H. Gordon France, Jr., MD
Michael W. Holmes, MD
Peter J. Neindenbach, MD
Samuel D. Reid, Jr., MD
Ralph A. Tesseneer, III, MD
John T. Tate, MD
Robert H. Taylor, MD
Jeffrey M. Wagner, MD
James P. Weeks, MD
SUMT-CLAR-LEE Linwood G. Bradford, MD
Mark M. Crabbe, MD
Jerome M. Davis, MD
James R. Ingram, MD
Usah Lilavivat, MD
William F. Young, MD
Alternates: S. Perry Davis, MD
Gilbert E. Parker, Jr., MD
UNION H. Woodliff Sanford, MD
WILLIAMSBURG Howard H. Poston, Jr., MD
Alternate: Harry W. Floyd, MD
YORK Richard L. Richter, MD
Christopher W. Schroeder, MD
James D. Welsh, MD

Specialty Societies

SC SOC. OF ALLERGY & CLINICAL IMMUNOLOGY Bruce D. Ball, MD
SC SOCIETY OF ANESTHESIOLOGISTS
Hector Vila, Jr., MD
Alternate: Mark L. Pinosky, MD
SC CARDIAC & THORACIC SURGICAL SOCIETY Not available at press time
SC DERMATOLOGICAL ASSOCIATION
Kenneth R. Warrick, MD
SC COLLEGE OF EMERGENCY PHYSICIANS Not available at press time
SC ACADEMY OF FAMILY PHYSICIANS
Albert D. Mims, MD
Alternate: George H. White, MD
SC SOCIETY OF INTERNAL MEDICINE
Steven R. Ross, MD
Alternate: F. Kay Huntington, MD
SC ASSOCIATION OF NEUROLOGICAL SURGEONS Not available at press time
SC NEUROLOGICAL ASSOCIATION
A. Daniel Vallini, MD
SC SECTION, AMERICAN COLLEGE OF OB/GYN S. Terrell Smith, MD
SC ONCOLOGY SOCIETY
Alternate: Lawrence B. Holt, Jr., MD
SC SOCIETY OF OPHTHALMOLOGY
Not available at press time
SC ORTHOPAEDIC ASSOCIATION
W. S. Edwards, Jr., MD

Robert H. Belding, MD

SC SOC., OTO., HEAD & NECK SURGERY
J. David Osguthorpe, MD

SOCIETY OF PATHOLOGISTS
Hans K. Habermeier, MD
Alternate: William V. Farnsworth, MD

SC CHAP., AMERICAN ACADEMY OF PEDIATRICS T. Dane Pierce, Jr., MD

SC CHAP., AMERICAN COLLEGE OF PHYSICIANS No Delegate

SC SOC., PLASTIC & RECONSTRUCTIVE SURGEONS Richard J. Wasserman, MD
Alternate: Harold Friedman, MD

SC PHYSICAL MEDICINE AND REHABILITATION Gregory M. Jones, MD
Alternate: Todd C. Johnson, MD

SC PSYCHIATRIC ASSOCIATION
No Delegate

SC RADIOLOGICAL SOCIETY
David R. Feldman, MD

SC CHAP., AMERICAN COLLEGE OF SURGEONS Thomas C. Litton, MD

SC SURGICAL SOCIETY
David J. Gatti, MD

SC THORACIC SOCIETY
Not available at press time

SC UROLOGICAL ASSOCIATION
Not available at press time

SC VASCULAR SOCIETY
Not available at press time

Other Delegates & Officers

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James N. Mock, MD

RESIDENT PHYSICIANS SECTION
Scott A. Hollingsworth, MD

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Layton McCurdy, MD

USC, DEAN, COLLEGE OF MEDICINE
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USC, MED. STUDENT SECTION PRESIDENT
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Walter J. Roberts, Jr., M.D., Delegate

AMA ALTERNATES
Stephen A. Imbeau, M.D., Alternate
Carol S. Nichols, M.D., Alternate
John W. Simmons, M.D., Alternate
S. Nelson Weston, M.D., Alternate

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OFFICER REPORTS

THE SECRETARY

Again this year, membership in the South Carolina Medical Association (SCMA) continues to be good. There has been an increase of 340 physicians practicing in South Carolina, which is a growth of five percent since our last Annual Meeting. SCMA membership, however, has increased by 430 members in this same period of time, which is a net increase of 10 percent. American Medical Association (AMA) membership, as well as South Carolina Political Action Committee (SOCPAC), AMA/Education Research Foundation (ERF), and South Carolina Institute for Medical Education and Research (SCIMER) all remain approximately the same as last year.

In an effort to try to involve medical students more in our organization, your Board of Trustees in October 1997, elected to make all medical students members of the SCMA. This included sending a copy of *The Journal* to each of those students on a one-year trial basis. It is our hope that a more vigorous outreach to students may encourage them to continue membership in the association when they go into practice. The publications division is looking at ways to incorporate medical student activities in *The Journal* and even to encourage medical student writings in *The Journal*. The board feels that this will be a positive step for the future of SCMA.

Last year, this report encouraged not only increased membership, but also increased participation in SCMA activities by its members. Again this year, that same plea is being given to you, the membership. Any member of the SCMA can find a job to be done within the organization. Accomplishment of tasks within the organization can only advance our cause.

I appreciate the opportunity to have served this association as its secretary for the last two years.

William H. Hester, MD
Secretary

THE TREASURER

As I complete my first year as treasurer of the South Carolina Medical Association (SCMA), I would like to present a short report about the SCMA's financial condition. A more comprehensive report will be presented to the 1998 House of Delegates in Charleston.

For the year ending June 30, 1997, the SCMA had a net revenue over expenses of $253,003, including depreciation expense of $55,337. Adjusting for depreciation, we showed a cash increase from operations of $308,340. The SCMA had a fund balance of $2,364,790 as of June 30, 1997.

The SCMA's current financial condition for the seven months ending January 1998 projects a positive financial position. At the end of January 1998, the SCMA had revenue over expenses of $201,433.

The investment policies of the SCMA and its affiliates have continued in a similar manner to past years, with diversified investments in federal treasury and agency notes and money market funds.

We have historically operated on a sound financial basis and should continue to do so. For the fiscal year ending June 1998, we project a surplus of revenue over expenses. I thank the membership for the privilege of serving as your treasurer for the past year.

J. Capers Hiott, MD
Treasurer

TRUSTEE, FIRST MEDICAL DISTRICT (METROPOLITAN)

Managed care continues to creep into the lives of Lowcountry physicians. However, in the rural areas, the impact has not been nearly so pervasive as in large urban areas. In dealing with the situation, the Beaufort Physicians Organization is still trying to establish firm footing. Some physician practices have merged. Hilton Head and Colleton Hospitals have been purchasing physician practices and are hiring new physicians. Beaufort Memorial Hospital (Broad River Healthcare) purchased the Lowcountry Regional Hospital in Ridgeland and has discussed plans for building a new hospital between Sun City and Hardeeville, while building a new outpatient center in Ridgeland to replace the current building. Hilton Head Hospital is building a new ambulatory surgery center next to Sun City. Hampton Hospital has renovated its surgical facilities, and Lowcountry Area Health Education Consortium (AHEC) is building a new outpatient center across the street. Colleton and Roper Hospitals are partnering to build an ambulatory surgical center next to Colleton Hospital.

As implied above, the physician population in the First Medical District is ballooning as the general district population continues to grow.

The county medical societies in the First Medical District have been relatively inactive, with the exception of Beaufort. The Beaufort County Medical Society has rejuvenated itself after many years of dormancy. It is actively meeting, forming an alliance, and participating in community projects. The members are particularly proud of their partnership with United Way, the school district, and Hilton Head Island Foundation in establishing the "Success By 6" program which will make the county's children intellectually and physically healthy by the time they are ready to enter school at the first grade level.

It has been my honor and pleasure to serve as First Medical District Trustee for the last year. I sincerely thank the members in my district for this opportunity.

Oswald L. Mikell, MD
Trustee, First Medical District
(Metropolitan)

REPORT OF THE TRUSTEE, SECOND MEDICAL DISTRICT (METROPOLITAN)

I have been fortunate to represent the Second Medical District (Metropolitan) to the South Carolina Medical Association (SCMA). In so doing, it is with pride that I report on the activities of the Columbia Medical Society over the past year.

We have had the capable leadership of Dr. Richard Helman during the course of 1997, and he is followed by Dr. Vince Degenhart in 1998. The transition of the presidency occurred at the Annual Ball at which time we honored our member, Dr. Charles W. Derrick with the Distinguished Service Award for Physicians. Our executive director, Marge Ehrenclou, received the Distinguished Service Award for a Lay Person.

Dr. Rick Greene, the chairman of the Community Concerns Committee, relocated to Charlotte, North Carolina, but the committee continues its Teen Violence Program in Richland County School District II under the guidance of Drs. Raymond Bynoe and Steve Rosansky.

The Mini-Internship Program was presented in May and November with participation by staff from the American Medical Association.

In conjunction with the Medical Society Auxiliary, University of South Carolina (USC) School of Medicine scholarships have been awarded. Also, the society has served as judge for the Basic Medical Science category of the Annual Central South Carolina Region II Science and Engineering Fair at USC. We have awarded prizes in two categories.

Other activities have included the annual luncheon meeting with members of *The State* editorial staff, scientific meetings for continuing medical education credit, business meetings with concentrations on socio-economic programs, institution of a Young Physician Task Force, participation in legislative activities at the state and regional levels, and homage to Dr. Nelson Weston as the president of the SCMA on its 150th anniversary.

The involvement of the members of the Columbia Medical Society in the medical arena and in community affairs in our region and state attest to the commitment necessary to maintain our quality of life.

Gerald A. Wilson, MD
Trustee, Second Medical District,
(Metropolitan)

REPORT OF THE TRUSTEE, FOURTH MEDICAL DISTRICT (METROPOLITAN)

The 1997 Greenville medical scene has been quiet. The openly hostile battles concerning hospital mergers have been non-existent. Greenville Hospital System has been very public in its attempt to reach out to the community. St. Francis Hospital System received a Certificate of Need to perform open-heart surgery and offers cardiac care in its new facility designed for that purpose. The Greenville Free Medical Clinic has had a successful campaign to relocate its facility to better serve the medical needs of the working poor and uninsured. This new clinic opens in April 1998.

The Greenville County Medical Society, under the leadership of James B. Page, MD, and Bruce A. Snyder, MD, has expanded its services to its membership. Patrick B. Mullen, MD, chairs the society's new International Relations Committee. The committee's purpose is two-fold; the first being to identify the medical needs of our international community and to assist in meeting these needs, and the second being to inform our members of medical mission opportunities both in the United States and internationally. The society published and distributed a booklet, *1997 Health Care Coverage Information*, to area human resource departments. The booklet was a natural follow-up to the Patients' Bill of Rights that the society wrote and distributed in 1996. The booklet assists individuals in making decisions concerning health care coverage, following up on claims or making appeals, and contains helpful telephone numbers and a list of the leading 25 insurance carriers/plans in South Carolina along with contact information. It is the intent of the society to update, produce, and distribute *Health Care Coverage Information* annually.

The society brought the American Medical Association (AMA) Extinguisher to Greenville for two visits. The Extinguisher provided an opportunity for the society to make a positive statement to area children about the danger of smoking. Special meetings have been organized for emeritus members, and a Young Physicians Section has been formed. Each meeting has been well attended, and we anticipate increased attendance.

Our staff, Robin Scott-Blackburn and Joan Crick, continue to serve our members very efficiently and happily respond to public questions and requests for referrals.

I am pleased with the growth of the Greenville County Medical Society and its ability to adapt to the changing environment of the medical community and to the needs of individuals in the community. I plan to continue service to the Fourth Medical District (Metropolitan) and appreciate the confidence placed in me by the membership.

John P. Evans, MD
Trustees, Fourth Medical District

TRUSTEE, FIFTH MEDICAL DISTRICT

The physician's health care agenda for the past year continued to be dominated by questions and concerns over health maintenance organizations (HMOs) and managed care organizations. In addition, the government turned up the temperature of the health care stew with renewed and intense emphasis on matters of health care fraud and abuse. In my trustee's report this year, I will consider each of these items in turn.

The past 12 months have seen a change in the national attitude toward managed care both by individuals as well as by governmental agencies. In locales where there is high managed care penetration, patients are concerned that their physicians are placing economic and utilization interests above their health interests. There is the perception that what used to be the medical practice is now the medical business. But patients and consumers have come to understand that paying less money and giving up control of their health care choices does not necessarily purchase better quality health care. Patients understand that quality health care is at least in part dependent upon a personal relationship with their physician and the ability to choose that physician. During the first part of 1997, negative attitudes toward HMOs rose from 26 percent to 35 percent. The average HMO experienced a six percent to eight percent resignation rate for primary care physicians each year. In our geographic area, 10 percent to 29 percent of HMO members drop out per year. A national poll recently revealed that 40 percent of the respondents stated that HMOs warranted more regulation. Compounding the HMOs negative public perception are recent revelations that children's health care, particularly the care of chronically ill children, is poorly provided for by HMOs. Only seven of 71 data points collected by the National Commission on Quality Assurance (NCQA) for HMO accreditation deal with children's health care. Additionally, 51 percent of employers rank cost as the most important decision maker in selecting a health care plan for workers versus seven percent who consider employee satisfaction as an important determinate. Finally, consider also that 77.5 percent of physicians feel that managed care has made the practice of medicine more difficult with 50.5 percent of physicians having experienced decreased satisfaction with medicine as a result of managed care. Only 12 percent of physicians feel that managed care has improved the quality of care.

Your state and federal legislators have not lost sight of the above facts. The agenda of Congress for the past several years has been focused on deficit reduction and reigning in the rapidly rising cost of medical care. With the impending elimination of the deficit in sight, Congress will be expected to turn its attention toward patient protection legislation and further restrictions on HMOs and other managed care organizations. A presidential commission is considering establishing a "council for health care quality" whose national aims and ongoing leadership would be directed at consumer protection and continuous improvement in health care quality. Growing complaints about denials of medical treatment, restricted access to specialists, and limits on physician decision making have engendered a range of proposals. These proposals range from a moratorium on takeovers of hospitals, HMOs, and physician practices to a legislative right to choice of health plans, to an automatic right to appeal treatment denials to an independent panel, to access to ombudsman programs to help file complaints, and to mandatory disclosure of details on how health plans work.

State governments are also increasingly getting in the act of regulating the HMO industry. The most recent regulations have been passed in Texas and have included provisions that give patients the right to sue their health plans for medical malpractice. The philosophy driving the passage of that particular state law was based on the fact that if HMOs choose to make medical decisions, then they ought to be held medically legally accountable in court for the results of those decisions. Similar legislation is pending in Arizona, California, Georgia, New Jersey, and New York. In North Carolina, new laws that go into effect in 1998 require the insurance industry to exercise the "prudent layperson" definition for emergency room visits; require all health benefit plans to conform to a standard definition of medical necessity; prohibit any plan with a provider network from discriminating against persons who are considered high risk; and eliminate retroactive denial for services, supplies, and other items covered under plan benefits once those items have been provided. Significantly, the North Carolina law also makes it an unfair trade practice for health insurers to impose a price reduction on providers without a contract for that discount and requires that providers who sign up for a network be informed of all health benefit plans using that network. Other detailed reporting requirements are imposed by the new North Carolina law as well as an organized utilization review and appeals process, and grievance process.

No significant HMO or managed care legislation was passed in South Carolina in the past year! Even more scary than the 300-pound gorilla of the largely unregulated HMO/managed care business, is the 900-pound gorilla of the federal government, specifically the Office of the Inspector General at the Department of Justice and the Federal Bureau of Investigation. In no uncertain terms, your federal government has declared war on health care fraud and abuse. This initiative comes about largely from legislation enacted through the Kennedy-Kassebaum Act and the Federal False Claims Act. Hospitals, independent laboratories, and physicians are going to be targets of an increasing number of investigations into health care fraud and abuse. Federal legislation enables and encourages individuals to be whistle blowers to situations that might be health care fraud and abuse. Furthermore, federal law rewards whistle blowers with a portion of any settlement made wherein individuals or institutions are convicted of health care fraud and abuse. This clearly spells rough driving ahead.

All physicians in South Carolina should be attuned to patterns of potentially fraudulent professional behavior and, in particular, to patterns of health care claims filing which might raise questions of health care fraud and abuse. All physicians' practices should have compliance plans aimed at eliminating fraudulent coding and billing procedures, particularly with regards to patients covered by Medicare, Medicaid, Champus, and other government sponsored medical care programs. Your South Carolina Medical Association can help you in this area with its Practice Management Services, Inc. subsidiary. All physicians should take the time to become informed on these issues as they apply to their specialty and type of practice.

Finally, a reminder that if you think you have it tough. Circuit Judge Harold J. Cohen of Florida calculated that attorneys' fees of $7,716.00 per hour were "clearly excessive" in the state negotiated settlement with "Big Tobacco" in August 1997. Of course, those lawyers are suing to have the judge removed. So things are tough all over for everybody!

Best wishes in the coming year and thank you for your continued support as your trustee.

R. Duren Johnson, Jr., MD
Trustee, Fifth Medical District

TRUSTEE, SIXTH MEDICAL DISTRICT

A number of activities have occurred throughout the Sixth Medical District that are directly or indirectly related to health care reform.

Hospital Services

Within the hospital community, all three hospitals in Horry County, Conway Hospital, Grand Strand Regional Medical Center, and Loris Hospital are involved in the development of outpatient surgery centers in both the northern and southern coastal areas. Certificate of Need discussions are in process. The merger of Marion and Mullins Hospitals in Marion County was completed in the summer of 1997, and the patients of Marion County are benefiting from the merger.

Physicians' Activities

Paralleling the evolution in hospital services, a great deal of discussion occurred among the physicians throughout the Sixth Medical District. In Horry County, the medical staffs at Conway Hospital and Grand Strand Regional Medical Center are developing independent practice associations (IPAs) to address the needs of their service areas.

During the past year, the Horry County Medical Society has been active, and there has been growing attendance at monthly meetings. The society continues to fund its own professional education programs, and recent educational modules have included academic practice management issues from nationally recognized speakers. Physician integration within Horry County to include IPAs, management services organizations (MSOs), and physician services organizations (PSOs) has been slow. All medical staffs are continuing to hold adhoc meetings to evaluate future options in physician integration.

Payor Environment

The Sixth Medical District remains largely an indemnity payment environment. Within the commercial sector, second generation physician preferred organization (PPO) products are being introduced. Preliminary discussions with global capitated payors are in early stages of consideration. Within the governmental payor community, TriCare's Champus related services and Carolina Care Health Plan's Medicaid services are being developed within the Pee Dee area. Select Health has begun providing Medicaid managed care services in the Florence area.

Summary

The consequences of market-driven health care reforms are beginning to be experienced throughout the Sixth Medical District. The rate of change of the predominantly rural and tourist areas is beginning to accelerate. The physicians within the Sixth Medical District continue to be committed to addressing the challenges of health care reform in a manner that will maintain the quality of care to the patients we serve.

Kenneth L. DeHart, MD, FACEP
Trustee, Sixth Medical District

TRUSTEE, SIXTH MEDICAL DISTRICT (METROPOLITAN)

As the 1990s come to a close, medical care is undergoing fundamental changes. Hospitals are networking and contracting with insurers and physicians. Doctors now find themselves contracting with insurers rather than with individual patients. The private practice of medicine is threatened by increasing overhead, government regulation, buyouts, malpractice, and decreasing reimbursement.

In the Sixth Medical District, McLeod Regional Medical Center and Carolinas Hospital System are both setting up physician-hospital networks to gain market share and, hopefully, offer higher quality, more affordable health care to the Pee Dee. It is vitally important now, more than ever, that doctors in the Pee Dee, and indeed the state, join their local, state, and national medical associations so that physicians will have the clout to help shape the face of medical care in the next millennium. We, on the South Carolina Medical Association (SCMA) Board of Trustees, need your grassroots input on all issues that affect patient care in South Carolina.

We also need strong leadership from within the ranks of practicing physicians in the state to be our patients' advocates. In the presidency of Dr. Nelson Weston, and President-Elect Dr. Steve Imbeau, we have strong and aggressive leaders. But, as we face the next century, we should also choose our president wisely.

I believe Dr. Bill Hester will be the right choice for the next century! Having practiced family medicine in Timmonsville for 12 years and directed the McLeod Family Medicine program since 1980, Dr. Hester has a broad wealth of experience from which to draw in leading the SCMA into the year 2000. I urge each of you to evaluate Dr. Hester's credentials. I think you will find him eminently qualified to become the next president-elect of the SCMA.

I want to thank the doctors from the Sixth Medical District for the privilege of serving them, and I look forward to serving them another term.

William N. Boulware, MD, FACP
Trustee, Sixth Medical District
(Metropolitan)

TRUSTEE, SEVENTH MEDICAL DISTRICT

The Seventh Medical District encompasses Sumter, Clarendon, Lee, Williamsburg, and Georgetown Counties. The practice of medicine in these predominantly rural counties is dynamic and challenging.

There have been many developments in the Seventh Medical District over the past year. First, Clarendon County Hospital is operating several nursing homes and three physician practices. The hospital is also constructing a Wellness Center. In addition, at least one family practice office in Clarendon County is affiliated/owned by a Florence hospital. Second, a physician-run managed care organization is being developed involving Clarendon, Georgetown, and Williamsburg County hospitals and physicians. Third, Williamsburg County is being impacted by primary care affiliated with Florence County in the Hemingway area. Fourth, there is significant continued population growth of the Georgetown coastal area. This growth is evident in the expansion of Georgetown Memorial Hospital to include a wellness center. The hospital also received approval for an ambulatory surgical Certificate of Need in the area known as the Waccamaw Neck in the northern coastal half of the county. The hospital in Georgetown also operates four physician practices. Fifth, Sumter's Tuomey Hospital has opened a satellite in Lee County. Sumter dermatologist, Dr. Lin Bradford, has been elected a member of the Executive Committee of the American Academy of Dermatology advisory board.

On a broader scale, we should take note of the involvement by South Carolina Medical Association (SCMA) physicians and staff with the American Medical Association (AMA). The AMA has undergone a major reorganization within the past year, in part due to the highly publicized Sunbeam affair. We, in the SCMA, have been kept well informed of AMA activities by our delegation and by Dr. Randy Smoak, of whom we can all be proud as an eloquent and informed spokesman for the medical profession.

I would like to encourage all physicians to become more familiar and comfortable with the use of computers, in general, and the Internet, in particular. Medical societies are developing home pages; patient information and research are available there...you name it.

This has been my first year on the SCMA board. I have been able to attend all the meetings and functions and have been duly impressed with the diligence and effort by all involved. The strength of the board, however, relies on the input from constituent medical societies and physicians. Keep us informed, and let us know when we can help.

Gerald E. Harmon, MD
Trustee, Sixth Medical District

THE SCMA DELEGATION TO THE AMA

It is my pleasure to report to the South Carolina Medical Association (SCMA) membership once more this year as chairman of an outstanding delegation, a record of dedication and performance which has marked South Carolina as a recognized force at American Medical Association (AMA) level. In addition to our elected delegates and alternate delegates, we have great participation in our delegation by specialty society delegates and by members of the Young Physicians Section of AMA. Dr. Ed Kimbrough from the American Orthopedic Association, Dr. Marion Burton from the American Academy of Pediatrics, Dr. Jim Scully from the American Psychiatric Association, and Dr. Greg Slachta from the American Urologic Association are all delegates. Also, Dr. David Osguthorpe of the American Association of Otolaryngic Allergists and Dr. Byron Hepburn of the Association of Military Surgeons of the United States are alternate delegates from their societies. Dr. Jim Mock and Dr. Richard Schmitt have been with our delegation frequently this year, keeping us abreast of activities in the Young Physicians Section.

All of these participants have given us a delegation that is visible, articulate, and influential in decision making at the national level, and I wish to thank them all and express my feeling that their input has greatly supported South Carolina.

Our member of the AMA Board of Trustees, Dr. Randy Smoak, has continued his rise in prominence in AMA. He has been a national spokesman for physicians of this country in several arenas, including the effort toward making this a “smoke-free” society by confronting the tobacco interests. Randy is currently the vice-chairman of the board, and is surely headed for even more important posts in the near future.

Dr. Dan Brake is in his second term as a member of the Council on Legislation. Dr. Chris Hawk is, at present, unopposed for a seat on the Council of Scientific Affairs. I am chairman-elect of the Southeastern Delegation, the largest coalition in the American Medical Association.

Also, one of the distinguishing characteristics of a prominent delegation is the appointment of delegates to the important task of reference committees. During the last several years, it is my recollection that every member of our delegation has been on such AMA committees. Dr. Chris Hawk has been chair of a reference committee, and I have twice been afforded this honor.

Perhaps at no time in the past has there been more complex, convoluted, and confrontational issues facing physicians than this past year. There are great concerns over the impending enforcement by the federal government of the new guidelines for Evaluation and Management Codes of Medicare. The new guidelines are felt to be burdensome and onerous by all who will be forced to use them, despite continuous efforts on the part of AMA to influence their design. Equally important is the specter of accusation of fraud and abuse if these guidelines are not carefully followed. Almost unbelievable is the fact that the Health Care Financing Administration (HCFA) has not even set aside monies to disseminate the guidelines to the physicians whom will be forced to abide by them.

A couple of years ago, AMA set out to structure a plan which would allow physicians to be accredited for purposes such as hospital staff admission, managed care organization panel admission, insurance verification, and the like. This subsidiary organization has come to be known as AMAP, the American Medical Accreditation Program. To this point, the plan has met with mixed success, since some state societies and local medical organizations have already been in the accrediting business. In my opinion, AMAP is a good idea that will, in time, bear fruit as a valuable service to practicing physicians. We, as a state organization, have endorsed AMAP, and I am sure you will be hearing more about it in the future.

During the past year, AMA had the misfortune of being involved in a contractual agreement that should have never happened. I speak of the widely discussed contract with the Sunbeam Corporation, something you have all heard about, I am sure. In my last report to you in *The Journal*, I related, in some detail, the events that led to this unfortunate incident. In fewer words, I will tell you that in 150 years of AMA's existence, we have never given outright endorsement of a product or service, that this contract did indeed constitute such an endorsement, and that the AMA has told Sunbeam that it will not honor the contract. Again briefly, what has been felt to have been a fail-safe mechanism of checking on such contractual arrangements did fail. Because of this, three top AMA officials lost their jobs, and the executive vice president, Dr. John Seward, resigned his position. Also, the AMA is now faced with a lawsuit that may end up costing AMA money. The entire situation was distasteful and should not have happened. However, great steps have been made to correct the mechanisms that did fail and to make sure that such a situation does not arise again.

Many other important issues have emerged and many other battles fought this past year. Physicians are being depanelized by managed care organizations without cause and without appropriate dueprocess; HCFA is still demanding Clinical Laboratory Improvement Act (CLIA) investigations, despite AMA efforts to have its regulations altered and the agency disbanded. Physician involvement in the management of home health services has been looked at by AMA in an effort toward making such involvement less arduous for the doctor since it is surely not very remunerative and not one of the places where fraud or abuse can be claimed by some governmental agencies. AMA attempts to address each and every one of these contentious problems on your behalf.

As I have said in previous reports to you, our constituency, your SCMA delegation is deeply involved and deeply committed to representing you at the national table in these debates. Please commit yourselves to the effort by joining AMA if you are not a member, to continuing your support if you are a member, and to letting your delegation know of your interests and views on these many issues. We will always be responsive.

Walter J. Roberts, Jr., MD
AMA Delegate

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Take advantage of our **Managed Care Contract Review Service**. We'll help you translate these agreements into plain English and make sure you understand what they really mean. Have your managed care contracts reviewed before you sign so you have the peace of mind you deserve.

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Consider our **Documentation Review Service**. We will come to your office, review your medical records, and help you determine whether the documentation in your charts supports your coding decisions. This kind of chart review is key to any effective compliance plan and is essential for any practice, regardless of size or specialty.

NOT SURE YOU'RE GETTING PAID WHAT YOU NEGOTIATED?

Maybe you're satisfied with the reimbursement rates you negotiated with your managed care plans. But have you ever checked to see if you're getting what you've negotiated? You may be surprised. Our **Reimbursement Review Service** will review your major managed care plans and make sure you're getting paid what they've agreed to pay you. In today's world, things like this shouldn't be left to chance.

CURIOUS HOW YOUR E&M UTILIZATION COMPARES WITH OTHER PHYSICIANS?

Curious about how your utilization of the various Evaluation and Management (E&M) Codes compares with other physicians in your specialty? Wondering how the distribution of E&M Codes in your practice compares with others? With our **E&M Utilization Review**, we can tell you. Using national data, we will compare your utilization and distribution of E&M Codes with the utilization/distribution of other physicians in your specialty and let you know where you stand.

DON'T KNOW A BYTE FROM A BITE?

Let us provide you with objective advice on the information technology issues facing your practice. Whether it is evaluating your current computer system, assessing your upgrade options, designing custom reports, or assisting you in evaluating Computerized Patient Records, we can level the playing field by acting as your advocate.

WORKING HARDER BUT ENJOYING IT LESS?

In today's environment, a successful medical practice does not just happen. It requires management, operational, and financial expertise—skills not taught in medical school. Whether you seek guidance in evaluating your billing and accounts receivable procedures, analyzing your overhead, or developing revenue enhancement strategies, we offer proven solutions that will work in your practice.

BUY, SELL, MERGE, OR HOLD?

Need assistance in charting your practice's future direction? We can assist you in sorting through your options and developing a strategic plan that makes sense for your practice.

NEED HELP IN DEVELOPING YOUR COMPLIANCE PLAN?

Practices of all sizes and specialties are considering developing a Compliance Plan to protect themselves. Establishing a compliance program can help avoid conduct that might attract scrutiny under the fraud and abuse laws and demonstrates your good faith efforts to avoid and detect improper activity. SCMA PMSI is available to assist you in developing an effective compliance program that meets the particular needs of your practice.

DOES YOUR COMPUTER NEED A CHECKUP?

Worried about your computer system? We do make house calls. We will come to your office, review the effectiveness of your backup procedures, ensure you are properly protected from lightning and electrical surges, check for year 2000 compliance, analyze your existing server and hard drive space utilization, and give you a written report of our findings—all for an extremely reasonable fee.

For more information about SCMA PMSI or any of the services we provide, please call Stephen Seeling at 798-6207, extension 260 in Columbia or statewide at (800) 327-1021. You may also send e-mail to **stephen@scmanet.org**.

South Carolina Medical Association Practice Management Services, Inc.
P.O. Box 11188
Columbia, SC 29211

OTHER REPORTS

THE CHIEF EXECUTIVE OFFICER

It is my pleasure to report to the House of Delegates on the activities of the South Carolina Medical Association (SCMA) and its subsidiaries.

Let me begin by reporting on the activities of the Members' Insurance Trust (MIT). Along with the growth in covered lives, we have experienced an increase in the volume and size of claims. We have had a higher than usual increase in the area of prescription drug utilization coupled with high costs for many of the newer drugs. Along with the increased utilization, we have also had to conform to the mandates of the Kennedy-Kassabaum Bill, and this has had an impact on underwriting as well as utilization, both of which affect costs.

SCMA Financial Services, Inc., our insurance agency, continues to grow and to expand the product line available to SCMA members. Insurance products such as health, life, disability, dental, long-term care, and professional liability are all available from our agents. I would encourage you to visit their booth.

The Physicians Care Network (PCN) is expanding, and the program will be profitable this year. The withhold was returned to PCN providers in the majority of cases, and a bonus was paid in many cases. The PCN still suffers from a lack of support from pathologists, radiologists, and anesthesiologists, and I hope they will consider joining with over 5,000 of their fellow physicians to support our managed care network.

The South Carolina Institute for Medical Education and Research (SCIMER) continues to offer scholarships to deserving medical students, and participation in the Section 170 Plan continues to grow. Physicians are taking advantage of the tax savings and retirement program elements of the program, and, at the same time, a future endowment of 30 million dollars has been pledged to SCIMER.

Our newest subsidiary, SCMA Practice Management Services, Inc. (PMSI), is off to a solid start and is providing many valuable services to physicians who are faced with the ever-increasing complexity of operating a medical practice.

Each of the subsidiaries has its own report, and I refer you to those reports for a more in-depth review of their activities and fiscal status.

The South Carolina Medical Association is the strongest it has ever been as we celebrate 150 years of service to the medical profession and to South Carolinians. We are currently in the process of conducting a management study of the SCMA, and recommendations will be made to the board for changes in the organization to prepare for the next five to 10 years of operation. Our legislative activities have, for the most part, carried over from last year. The Report of the Interspecialty Council provides the current status of these issues and the numerous others that we monitor. This year is an election year, and for those of you who have not joined South Carolina Political Action Committee (SOCPAC), I would encourage you to do so. We have important elections at both the state and national level, and our financial support to candidates is important.

This year, we added another 3,000 square feet to our building to accommodate additional staff members. We also remodeled the entire building—a task that was long overdue since we were replacing the 14-year-old original wall covering and carpet. Another change to the headquarters was the sale of a strip of land across the front of our property to accommodate a future expansion of I-26. No date has been announced for when construction will start.

The financial affairs of the SCMA and the subsidiaries remain healthy, and our membership continues to grow. I refer you to the reports of the treasurer and the secretary for detailed financial and membership information. I anticipate that the 1998-99 fiscal year will be better than this year, and that we will experience growth in all our activities.

Finally, on behalf of the staff of the SCMA and myself, I would like to take this opportunity to thank you for your support and for giving us the opportunity to serve you.

William F. Mahon
Chief Executive Officer

SCMA MEMBERS' INSURANCE TRUST

The South Carolina Medical Association (SCMA) Members' Insurance Trust (MIT) completed the last fiscal year with a loss of $1,333,475. The total revenues collected for the year ending June 30, 1997, were $9,540,153, and claims paid plus expenses amounted to $10, 873,628.

This was the fifth consecutive year without a rate increase. An actuarial study has been done, and the MIT Board is considering across the board increases. In addition, changes were made to our drug program to compensate for increased costs and utilization.

The MIT has a cash reserve for incurred, but not reported, claims of $2,143,100 and an unassigned reserve as of June 30, 1997, of $4,958,793.

The accounting firm of Elliott Davis conducted a financial audit of the MIT, and a copy of that audit for your review is attached to this report.

The MIT continues to offer the advantages of guaranteed acceptance into the plan for SCMA members, coverage for your spouse if you predecease, and a plan totally owned and operated by the physicians of the SCMA.

J. Capers Hiott, MD
President

THE SOUTH CAROLINA INSTITUTE FOR MEDICAL EDUCATION AND RESEARCH

The South Carolina Institute for Medical Education and Research (SCIMER) awarded 17 scholarships at the 1997 South Carolina Medical Association (SCMA) Annual Meeting. Fourteen scholarships in the amount of $1,500 each were awarded to seven students from the Medical University of South Carolina and seven students from the University of South Carolina. Also, a SCIMER Research Scholarship for $2,000 was awarded, and a cardiology group from Spartanburg awarded two scholarships. A total of $25,000 in scholarships was presented.

Last year, the SCIMER Board proposed that the funds from the Swift Black Scholarship Fund be used to augment four potential scholarships so that each scholarship would be in the amount of $1,500. These four scholarships include the Conway Hospital Medical Staff Scholarship, the two Spartanburg Cardiology Scholarships, and the Annie and Charles H. Fair Scholarship.

This year, the SCIMER Board has put much effort into trying to find and archive the history of SCIMER. Also, documentation of the origins of the non-SCIMER scholarships was researched. Valuable historical information has been accumulated, and thanks go to Dr. Michael Watson, Bamberg (concerning the Stuckey Scholarship), Ms. Robin Scott-Blackburn, Executive Director of the Greenville County Medical Society (concerning the Annie and Charles H. Fair Scholarship), and Dr. Alexander Donald, past-president of SCIMER (concerning the history of SCIMER).

Future assets in the Section 170 Plan continue to grow. Currently, SCIMER has assets of over $30 million in benefits as a result of physicians who have invested in section 170.

In an effort to generate more funds for medical student scholarships, SCIMER instituted a "Season's Greetings" Program last year. An appeal was made through the "SCMA Newsletter" and flyers were sent to all members suggesting they make a contribution to this project in lieu of giving gifts to colleagues. This first year, only seven physicians participated in the program, and 99 cards were sent. We trust this program will grow in 1998.

Your SCIMER Board has served the SCMA and its membership well. This will be my last year on this board, and I have enjoyed serving you for the past six years.

William H. Hester, MD
President

THE FASTER WE GET THERE, THE MORE LIVES WE SAVE!

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SPECIAL GUEST:
JOHN C. "JACK" LEWIN, M. D.

Dr. Lewin is executive vice president and chief executive officer of the 35,000 member California Medical Association, the nation's largest state medical association, and its nine subsidiary companies. He manages 150 staff and a budget of $16 million. He assisted in the formation of a physician-owned, statewide health plan offering a variety of products to small and large employers. He also conceived and led development of that association's Institute for Medical Quality, an evaluation and accreditation agency focusing on quality of care by health maintenance organizations, hospitals,and other health facilities.

Dr. Lewin serves on many boards, advisory panels, and committees. His appointments include the Hepatitis Foundation International, the Public Health Foundation, The Partnership for Prevention, based in Washington, D. C., and the California Governor's Council on Sports and Fitness.

His public service honors include awards from the U. S. Public Health Service Commissioned Officers' Association (*Physician Leader of the Year*, 1994), the American Medical Association for HIV/AIDS prevention and treatment accomplishments (*Nathan Davis Award*, 1994), the American Hospital Association for improving private sector access to health care (*Justin Ford Kimball Award*, 1993), and the Association of State and Territorial Health Officials for public health leadership (*McCormack Award*, 1993). These accomplishments were built on a foundation of 15 years experience as a primary care physician serving rural and underserved populations.

A nationally known speaker on health policy issues, Dr. Lewin has delivered more than 300 keynote addresses to health care and business audiences nationwide. He is regularly sought by major state and national media to comment on a variety of health care and policy-related topics. He is the author of numerous health policy and clinical medicine articles in a variety of professional and policy journals.

Dr. Lewin received his B. A. in biological science from the University of California, Irvine and his M. D. from the University of Southern California. He and his wife Sandra have three children: Jennifer, Shane, and Josanna.

150th SCMA ANNUAL MEETING
EXHIBITORS 1998

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AHEC
Air Force Health Professional
Astra Merck
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BellSouth Advertising & Publishing
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Carolina Physicians Services
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Schwarz Pharma
SmithKline Beecham
St. Mary's Health Systems
SC Academy of Physician Assistants
SC Dept. of Health & Human Services
SCIMER
SCMA Financial Services, Inc.
SCMA Medical Aspects of Sports Ocular Eye Injury
SCMA PMSI
SC Medical Group Management Assoc.
SC Medical Management Association
SC Organ Procurement Agency
SC Society of Medical Assistants
Transworld Systems, Inc.
USC-School of Medicine
Wallace Laboratories
Windsor House

ACKNOWLEDGEMENTS

The SCMA gratefully acknowledges contributions to defer meeting costs from the National Bank of South Carolina (NBSC), R. L. Bryan Company, and PrintSouth. The Young Physicians Section Luncheon is compliments of the AMA Young Physicians Section. The Residents Breakfast is compliments of the AMA Resident Physicians Section.

The ice cream booth is compliments of Physicians Care Network, and the popcorn is compliments of SCMA Financial Services, Inc. Friday morning's coffee breaks are compliments of BellSouth, ACMG, and Doctor's Care.

The Gala President's Reception is compliments of Carolina Physicians Advisory Service.

Editorials

SACRED TRUST

Officers and guests of the South Carolina Medical Association celebrated its sesquicentennial at a banquet on February 14, 1998, which happened to be Valentine's Day. It was fitting that the presiding officer was Dr. S. Nelson Weston, our only third-generation president. Dr. Weston's grandfather is generally regarded to have been South Carolina's first pediatrician, and his father, the late William Weston, Jr., was a multifaceted man who led and enlivened our profession for more than half a century. Nelson confided at the banquet that his involvement in medicine came somewhat reluctantly for his life was already full. He said:

> *I would not have been fulfilled had I not become involved in organized medicine...I only wish that every doctor in the state could have had my experience, and then they would know what a great organization the SCMA is and will always be.*

The path of least resistance leads to indifference and cynicism. To get involved requires energy, but reinforces our ideals.

And what are our ideals? They are embraced by that elusive term, "professionalism." When the SCMA was founded 150 years ago, the state of professionalism in medicine was as shaky as that of mid-nineteenth-century medical science. Medical science now prospers as never before, but our future as professionals is uncertain. We worry that we're losing control. We worry whether the medical profession as we've known it will be around a hundred years from now.

Definitions of "profession" generally stipulate a common body of knowledge and a degree of altruism, putting others' interests above one's own. A stricter definition stipulates the so-called "learned" professions: law, medicine, and the ministry. This triumvirate is considered "learned" by dint of having been the subject matter taught in medieval universities. It's always seemed to me that law, medicine, and the ministry command public respect and even awe because their practitioners make difficult judgment decisions in areas of uncertainty. Therein lies the rub.

IMAGES OF THE HEALER

Image	Function
Fighter	Makes war on health and disease
Parent	Shows compassion and benevolence
Technician	Provides excellent technical service
Covenanter	Demonstrates responsibility, services, and fidelity
Teacher	Assists patients in coping with incurability

*After May W. *The Physician's Covenant*. Philadelphia: Westminister Press, 1983.

We will always need lawyers because the outcome of a human conflict will always be uncertain. We will always need ministers because the outcome of our existential dilemma will always be uncertain. But year by year the relentless advance of medical science makes the outcome of matters related to health a less dicey proposition. Today's patient wants good technology. Cost aside, that's not all bad. Our task is to make sure that "technician" does not become our only identity.

I recently perused a book entitled *Do We Still Need Doctors?* by a thoughtful pediatrician-bioethicist, Dr. John Lantos. Among his points are the following:

- Bioethicists debate whether medicine is mainly a moral enterprise or a technical/scientific enterprise. Many bioethicists (n.b., the field is dominated by nonphysicians) conclude that medicine is a technical enterprise rather than a moral one. This view would lead to a "hostile moral takeover."

- Technical success is seductive. Physicians preoccupied with technical interventions risk losing the historic role of the physician as an interpreter of illness and suffering. Lantos concludes that disease cannot be cured nor suffering relieved, "doctors are no longer sure what to do or whether they will still have a role to play."
- Society reinforces our love affair with technology. Various social, political, and even moral forces "have institutionalized the doctor's role as one that embodies the values of empiricism, quantification, and objectivity." This inexorably impacts on the way we think about ourselves.
- Policy-makers, economists, health-services researchers, and even basic scientists drive us toward the conclusion that medicine is most efficient "if patients are treated as virtually interchangeable and physicians' behavior is confined within strict algorithms."
- In this scenario, physicians who behave as individualists and who cling to the traditional role of wise counselor/teacher in matters of uncertainty risk being marginalized. Successful physicians (at least, "successful" in the usual sense) will increasingly specialize and subspecialize.

Lantos concludes that there will still be a role for the "older type of doctor" especially for patients whose problems don't fit neatly into clinical algorithms. But such physicians may not be rewarded.

What can be done? At least two things.

First, we can rededicate ourselves as individuals to our main concern: our patients. We can begin each morning by recalling what we told the Admissions Committee, which was basically that "I like science and I want to help people." We can resolve to focus more intensely on our patients' narratives, their stories of joy and sorrow. We can cultivate self-awareness of our natural tendencies to allow compassion to be crowded out by the pursuit of technical competence, even though competence at what we profess to be good at should be our top priority.

Second, we can rededicate ourselves collectively to the ideal of medicine as a profession in the best sense. We can resist the forces that declare that patients should be gathered and stuffed into pigeonholes and processed algorithmically through "product lines." We can remind ourselves of what our founding members knew only too well 150 years ago: the boundaries of medical practice must be staked out and defended. And we can remember what Dr. Nelson Weston had to say at our sesquicentennial banquet: the SCMA is a great organization, and getting involved can be an enormously fulfilling experience.

A highlight of each Annual Meeting is the non-denominational worship service on Sunday morning. These services remind us that medicine is indeed a high calling, a sacred trust. Along that line, I strongly recommend a just-published book by Dr. Clif Cleaveland (a colleague with South Carolina roots) entitled *Sacred Space*. Cleaveland makes it clear that, despite technology, medicine is a deeply personal matter. He concludes that the "sacred space" is the point at which two journeys—ours and the patient's—coincide. The extent to which we defend that space against the forces that would close it will determine, at least in part, the survival of medicine as we have been privileged to know it.

—CSB

REFERENCES

1. Lantos JD. Do we still need doctors? New York & London: Routledge, 1997.
2. Cleaveland C. Sacred space: Stories from a life in medicine. Philadelphia: American College of Physicians, 1998.

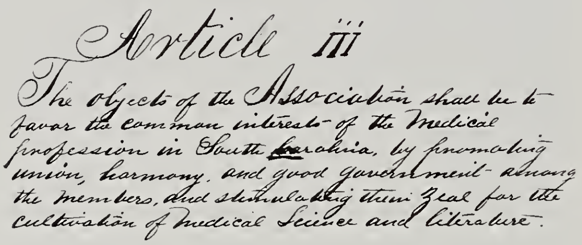
On the Cover:

MINUTES OF THE PROCEEDINGS OF THE MEDICAL CONVENTION OF SOUTH CAROLINA HELD IN CHARLESTON, FEBRUARY 1848

Monday, February 14, 1848

In pursuance of a call made upon the Medical Profession of South-Carolina, by the Medical Society of South-Carolina, a large number of physicians from all parts of the State, convened at 10 o'clock this morning in the Hall of the Apprentices' Library Society.

Thus, begins the *Proceedings of the South Carolina Medical Association* for 1848.



Article III

The objects of the Association shall be to favor the common interests of the Medical profession in South Carolina, by promoting union, harmony, and good government among the members, and stimulating their zeal for the cultivation of medical Science and literature.

Accompanying the name and membership requirements featured on the cover this month is the organization's purpose.

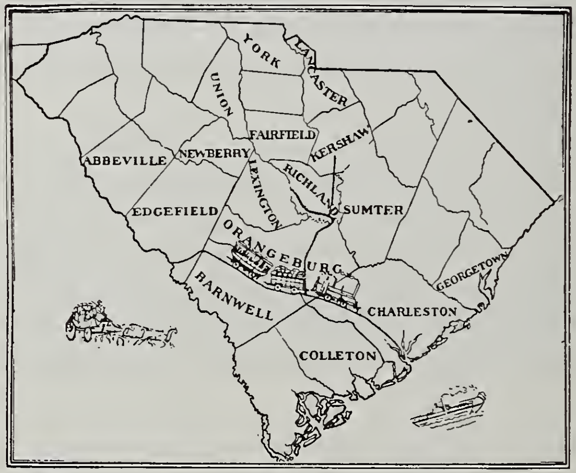
Counsellors elected at the convention were:

Abbeville — Drs. Isaac Branch and T. B. Dendy
Barnwell — Dr. Amory Coffin
Charleston — Drs. J. Moultrie, E. Horlbeck, T. Y. Simons, J. P. Jervey, F. Y. Porcher, S. W. Barker, R. Lebby, J. C. McKewn, H. Ravenel, T. Curtis, F. M. Robertson, W. T. Wragg, and D. J. C. Cain.
Chesterfield — Dr. A. Williams
Colleton — Drs. Edward Mitchell and H. W. Ford
Edgefield — Drs. J. C. Ready and A. W. Youngblood
Fairfield — Dr. Thos. T. Robertson
Georgetown — Dr. J. E. Easterling
Kerhaw— Drs. W. J. McKain and R. B. Johnson
Lancaster— Dr. R. E. Wylie
Lexington — Dr. G. Muller
Newberry — Dr. J. W. McCants
Orangeburg — Dr. T. A. Elliott
Richland — Dr. S. Fair
Sumter— Dr. J. A. Mayes
Union — Dr. W. K. Sims
York — Dr. J. R. Bratton

ELECTED OFFICERS:

Dr. James Moultrie, Jr., President
Dr. Isaac Branch, Vice-President
Dr. J. C. Ready, Vice-President
Dr. D. J. C. Cain, Recording Secretary
Dr. R. B. Johnson, Corresponding Secretary
Dr. F M. Robertson, Treasurer
Dr. P. C. Gaillard, Orator for 1849

There were 756 practitioners of medicine in South Carolina when SCMA was organized in 1848. The map below represents the districts active at that time. Note that for some reason Chesterfield, which lists a Counsellor, is not listed on the map.



Jane McCutchen Brown, Curator
Waring Historical Library

Who's WATCHING OUT For You?

From providers to community leaders, researchers to educators, and government officials to citizens, the National Rural Health Association's members seek to improve the health care of rural Americans through advocacy, communications, education and research.

Shrinking populations, stalled economic conditions, reduced health care dollars and elderly patient bases create challenges for communities and health care providers alike. In rural communities across America, concerned community leaders and citizens pool their energies to make high-quality health care available and affordable.

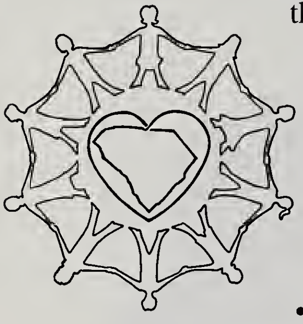
The National Rural Health Association and its members work to overcome rural health care challenges. They focus on reforming and strengthening health care to meet the needs of rural areas. While government funding continues to dwindle, this multidisciplinary group of health professionals and leaders finds innovate solutions to complex dilemmas.

NATIONAL RURAL HEALTH ASSOCIATION — *Caring for the Country*

For more information, contact the NRHA,
One West Armour Boulevard, Suite 301, Kansas City, MO 64111;
816-756-3140; fax 816-756-3144.

Alliance Page

REPORT OF THE SOUTH CAROLINA MEDICAL ASSOCIATION ALLIANCE



Once again, it is time to pass the baton to the next South Carolina Medical Association Alliance (SCMAA) president. As I reflect on the past year, the 75th anniversary year of the alliance, I feel a sense of pride in the many accomplishments of our organization. We know that "A True Team Beats With One Heart." The list below highlights our many endeavors:

- The alliance raised an estimated $100,000 during the 1997-1998 year, for use in health related projects and for charities statewide.
- Approximately $40,000 was raised by the alliance in South Carolina for the American Medical Association Education and Research Foundation to be used by medical schools throughout the country.
- Not only have alliance members contributed financially, but we have also contributed countless numbers of manpower hours for community service projects in 21 South Carolina counties.
- Elder Abuse, one of our special projects, was addressed by several counties. An elder abuse brochure was developed and used as an educational tool and public service announcement. It is now part of the American Medical Association Project Bank. The South Carolina Adult Protection Coordinating Council has requested the brochure for distribution. A county alliance and its community developed the first area "hot line" for senior citizens as a joint project.
- For the first time ever, we were able to combine SCMA, SCMAA, and American Medical Association Alliance (AMAA) efforts for a joint workshop on membership and legislation. SCMA staff, Jan McKellar and Steve Williams, were instrumental in its planning and implementation, as well as our AMAA field director, Ann Faris.
- This year, the alliance again cosponsored, with the South Carolina Nurses Association, the School Nurse Conference, which reaches approximately 400 participants.
- As part of the alliance's Diamond Jubilee and the SCMA's 150th anniversary, the history of the alliance was highlighted in a newspaper insert placed in six major papers across the state.
- Participation of the SCMAA at a national level is demonstrated by several of our members who attended two leadership confluences, one membership seminar, and the Annual Session of the American Medical Association Alliance. We are pleased to have Ms. Hope Grayson serving as American Medical Association Alliance field director.

No one person can do all of this. It is a combined effort of many diverse talents blended together to make the alliance. We can be proud to have one of the best state alliances in the nation and to have national recognition and representation. But we can not rest on our past accomplishments nor be content. **We** must dream of a better medical community, one which works together to provide available care, one which does not know barriers, and one we can all be proud to be a part. As "Physicians' Spouses Dedicated to the Health of South Carolina" we can help to make changes and take an active role in supporting our communities. It is these dreams that will keep us working together. Lest we never forget…"A True Team Beats With One Heart."

I challenge physicians and physicians' spouses alike to dream of a future for the alliance which provides these things and more. I leave you with this poem by Langsten Hughes.

Hold fast to Dreams
For if Dreams die
Life is a broken winged bird
That can not fly.

Hold fast to Dreams
For when Dreams go
Life is a barren field
Frozen with snow.

Thank you SCMA and SCMAA for your support. The baton is passed.

Dee Jewell (Mrs. James L.)
President, SCMAA, 1997-1998

Classifieds

ALLERGY & IMMUNOLOGY, CARDIOLOGY, FAMILY PRACTICE, INTERNAL MEDICINE, ORTHOPAEDIC SPINE SURGERY—Practice opportunities exist in local medical facilities and with private practice groups in Orangeburg County for experienced practitioners and graduating residents/fellows. All positions include salary, benefits package, and relocation allowance. Located at the junction of I-26 and I-95, 35 minutes to Columbia and 65 minutes to Charleston. Area known for its gardens, golf, hunting, and fishing (Lake Marion). Achieve financial success in a non-competitive environment while enjoying a superior quality of life. *Contact Dr. Chermol, The Regional Medical Center at (800) 866-6045.*

WANTED: PRIMARY CARE PRACTICES: UCI MEDICAL AFFILIATES, INC.,—DOCTOR'S CARE, PA is currently expanding in South Carolina! Seeking primary care medical practices for merger/acquisition. Would also consider specialty practices. *Please direct CVs, correspondence to UCI Medical Affiliates, Inc. (dba Doctor's Care, PA), 1901 Main Street, Suite 1200, Mail Code 1105, Columbia, SC 29201, Attn: Practice Acquisitions.*

FAMILY PRACTICE/PRIMARY CARE: Practice opportunities in South Carolina for experienced practitioners on a full-time or part-time basis. If you are looking for a little extra "butter and egg" money, we have short-term placement. When you are considering making a change in your job status, we would be honored to discreetly represent you. *Jennie Ware* Family Medical Services, Inc., provides the highest quality provisional contract medical services to: family practices, clinics/urgent care centers, hospital systems, nursing homes and assisted living centers, and multidisciplinary groups or networks. We are located in Greenville, SC. *For more information, call toll-free (888) 593-6737, or visit our website* http://www.jennieware.com.

GROUP OF RESIDENCY-TRAINED EMERGENCY PHYSICIANS: Need board certified EM independent contractor to fill 5-7, eight hour shifts per month. 120 bed hospital in rural upstate South Carolina. *Fax CV to 1-864-888-1403.*

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Gray Matter

"Matters of Interest to South Carolina Physicians."

Thornton & Thorne give the medical community something to think about this month.

HOW MUCH DOES $1,000,000 OF LIFE INSURANCE COST?

Life insurance creates instant capital. As soon as your application is approved and you pay the first premium, you create an asset that will provide an income to your beneficiaries in the event of your death.

The cost to create $1,000,000 of capital has decreased over the last several years. The premiums from one company for insureds who meet all the underwriting requirements and who have not used tobacco in any form in the last 12 months are:

Age	Sex	Standard	Preferred	Sex	Standard	Preferred
35	M	$765	$575	F	$645	$505
40	M	$1,065	$825	F	$855	$675
45	M	$1,595	$1,245	F	$1,215	$985
50	M	$2,315	$1,695	F	$1,665	$1,275
55	M	$3,405	$2,505	F	$2,245	$1,805
60	M	$5,315	$4,005	F	$3,225	$2,705
65	M	$8,965	$6,965	F	$4,985	$4,065

Banner Life Insurance Company OPTerm 10. A standard risk is one who has no significant health impairments, which would require an extra premium. A preferred risk is a standard risk who also meets other, more stringent underwriting rules.

The premiums are for 10 year level term insurance and are guaranteed not to increase during the 10 years. Should you wish to keep the policy for more than 10 years, the policy contains a valuable provision that guarantees your right to convert to a permanent policy regardless of any changes in your health. The conversion privilege lasts for 10 years, subject to a maximum age of 65.

We tend to underestimate the amount of capital that will be required to provide adequate income. For example, $1,000,000 invested at 6% will provide the following after-tax income to a beneficiary in the 35% income tax bracket:

Monthly Income	Years Income Will Last
$5,000	27
$8,000	13
$10,000	10

If you'd like to receive more information on the cost of term life insurance, please return the form and we'll forward a survey of premiums from a number of companies.

Carolina Physicians Advisory Service, PO Box 688, Columbia SC 29202-0688

Name ______

Street ______

City ______ State ______ Zip ______

Date of Birth: ______ Sex: ______ Amount Desired: $______

Years of Coverage: 10______ 15______ 20______

Months Since Last Tobacco Use: <12______12 ______24 ______36 or more______

Underwriting Class to Assume: Preferred ______ Standard ______

Views expressed herein are those of the authors and in no way represent SCMA. We do not give tax advice. Only your attorney and accountant are qualified to do so.

Carolina Physicians
Advisory Service

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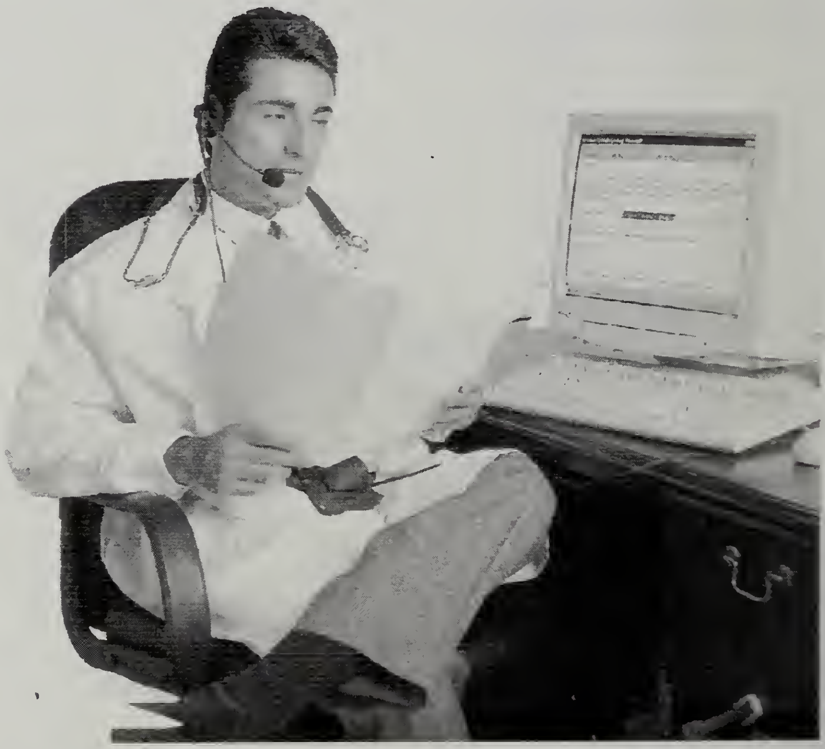

The Journal™
OF THE SOUTH CAROLINA MEDICAL ASSOCIATION

VOLUME 94
NUMBER 5
MAY 1998
PAGES 199-242

ANTIRETROVIRAL THERAPY, 1998

DYNAMIC STEREOTACTIC RADIOSURGERY: THE CHARLESTON PROGRAM

THE MEDICAL WORKFORCE IN SOUTH CAROLINA

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"This is a place that offers experiences, and memories, of substance..."

"This is the life I remember as a child, when playing didn't mean videos and computer games..."

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or (803) 886-8783

Dewees Island Real Estate, Inc.
Billy Judy, BIC

Obtain the Property Report required by Federal law and read it before signing anything. No Federal agency has judged the merits or value, if any, of this property. N.J.E. 6-96-3/1

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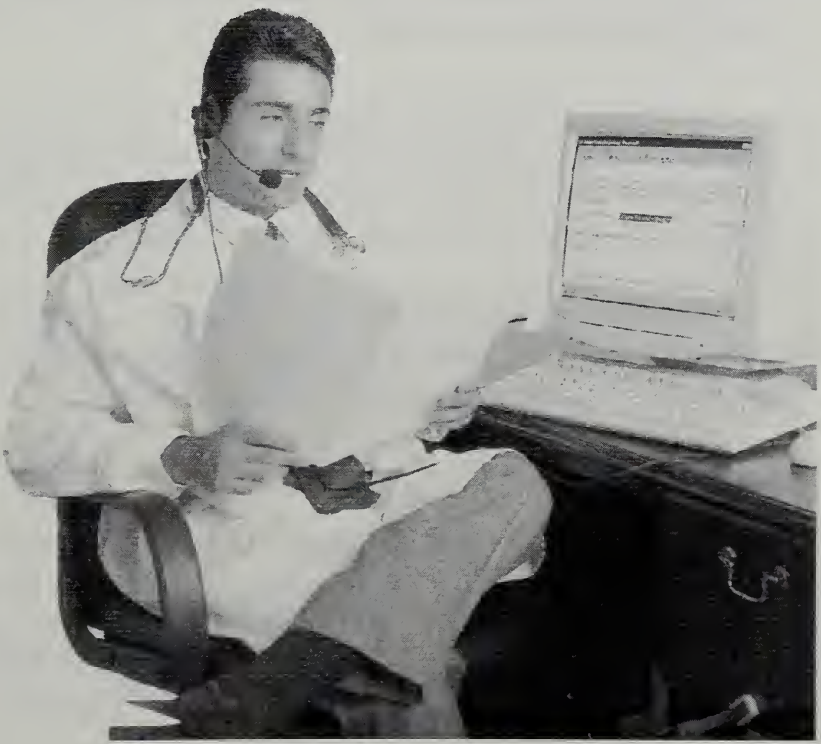
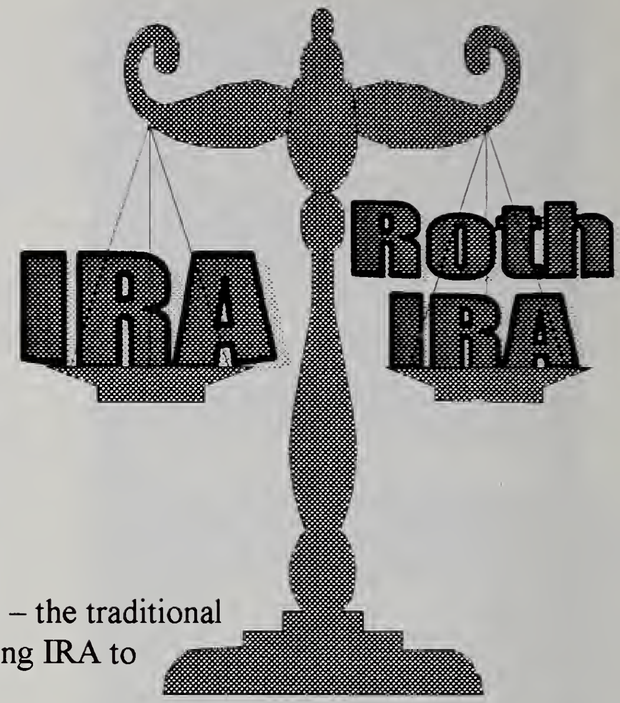


Weighed the Difference?



Everyone is talking about which IRA is best – the traditional IRA or a Roth IRA. Should you convert your existing IRA to a Roth IRA?

That seems to be the hottest topic of discussion these days amongst those with significant balances in their IRA. If you keep your money in the traditional IRA, you may soon be required to take minimum distributions that are fully taxable. At your death, the total account may be subject to both income and estate taxes.

On the other hand, you can elect to transfer your traditional IRA to a Roth IRA. You pay taxes now on the full transfer amount, but it continues to grow tax free and subsequent distributions for retirement or death will not be subject to income tax.

So which one is better? Well, if you said you don't know, you're right. Nobody does. That's because we don't know what future tax rates will be or when you will die. So there's no way of knowing whether it makes sense to defer the taxes now or transfer the money at today's tax rate and avoid the tax later.

What if there was a third choice? One where you could transfer the money from your traditional IRA to the new account with no current income tax consequence, it would continue to grow tax free, any future withdrawals would be tax free and the remaining balance would pass income and estate tax free to the next generation!

Sound incredible? Well it's true. And it's available today, with an extremely minimal and manageable downside risk. So why hasn't your financial advisor told you about this alternative approach? Probably because he doesn't know. Maybe it's time you talk with someone who does.

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President's Page

THE EVOLUTION OF MEDICINE

Well, here we are. We will spend the next 11 months together. So settle back and let's get comfortable and acquainted. But don't get too comfortable because we have work to do.

I am pleased to share this 150th anniversary year with Dr. Weston who has done such a superb job during his presidency, and he will continue his work for us on the AMA delegation.

Think of that! One hundred and fifty years! We have done so much and come so far. But this is a changing world, and we still have much to do. We can be proud of our record and our achievements. The association has worked to improve medical education and has striven to require licensure. Our association has also worked to protect pregnant mothers. We helped form the Blue Cross and Blue Shield organizations, and we have worked hard to improve infant health. In addition to this, we have worked hard to open all of our eyes about the prevalence of family violence and solutions to this problem. Nationwide, we have been recognized as medical leaders as our association has taken the forefront in adopting new computer technologies.

But now we stand on the threshold of still greater challenges. We must face the reality of the intrusion of big business into the practice of medicine. We must also face the reality of the diversity of the physician population. There will be more employed physicians and larger integrated group practices. The association is prepared to deal with this evolution of medicine.

Over the next year, I will address these challenges with several gleamings from our new strategic plan. Our organization will continue to provide a common home for physicians, education services, and legislative activities. We will also continue to provide commercial services to our members, including insurance products, practice management advice, and of course, our Physicians Care Network.

Physicians Care Network (PCN) continues to grow. It is still gaining the reputation of doing the impossible: controlling health care costs while maintaining quality medical care with physician oversight and ownership. PCN has no expensive Wall Street overhead, and PCN has returned premium dollars to industry and withholds to its physicians. We believe PCN is the new model for physician controlled health care. So get involved and help to spread the word. You see, this is a new era: physicians can indeed work together and control costs and maintain services. There is no longer any need for 30 percent or more of the health care dollar to go to investors and executives. Join us!

See you next month.

Stephen A. Imbeau, M. D.
President

The Journal OF THE SOUTH CAROLINA MEDICAL ASSOCIATION

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MAY 1998
NUMBER 5

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SCMA NEWSLETTER

A PUBLICATION OF THE SOUTH CAROLINA MEDICAL ASSOCIATION

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Contributions welcome

May 1998

HIGHLIGHTS OF THE APRIL 23-26 BOARD OF TRUSTEES MEETINGS

Patients' Compensation Fund: The board agreed to create a task force of physicians and other health care providers associated with the Patients' Compensation Fund to thoroughly study the existing medical malpractice insurance and report back to the Board of Trustees in September 1998.

South Carolina Institute for Medical Education and Research (SCIMER): The board elected the following physicians to the SCIMER board: J. Frank Biggers, III, MD; Edward E. Kimbrough, MD; and Jerry R. Powell, MD.

South Carolina Political Action Committee (SOCPAC): The board elected the following physicians to the SOCPAC board: Jim Mock, MD, to represent the 2nd District and Oswald L. Mikell, MD, to represent the 6th District. ❐

MEDICARE UPDATE

Claims and Other Correspondence: In order to receive, route, and process your claims in the most efficient manner, Medicare needs you to take note of the following guidelines.

First, the Medicare Part B office has moved. However, their mailing address has not changed. Secondly, you should continue to send all claims to the address below. Also, you should not mail claims to anyone's attention. All mail will be opened, and claims will be routed to the claims processing area, not to any individual you specify. When sending correspondence to the Customer Service Center, be sure to put your specialty team on the envelope. A list of specialty teams appears on page three of the May 1998 *Medicare Advisory.*

Medicare Part B
Palmetto Government Benefits Administrators
P.O. Box 100190
Columbia, SC 29202-3190

Home Health Venipuncture: The Balanced Budget Act (BBA) of 1997 made some changes in a beneficiary's eligibility for Home Health Services. The BBA removed a beneficiary's eligibility for home health services if the only skilled service that the beneficiary needs is blood drawing. This provision was effective February 2, 1998.

There is a Medicare Part B benefit, payable by carriers and intermediaries, for venipuncture and travel to obtain the venipuncture. Venipuncture services are paid under the clinical laboratory fee schedule using HCPCS procedure code G0001 (Routine venipuncture for collection of specimen[s]). The allowance is $3.00. Travel expenses to obtain the specimen from home bound or nursing home patients may also be paid. Use the following HCPCS procedure codes to report these services.

- P9603: Travel allowance one way in connection with medically necessary laboratory specimen collection drawn from home bound or nursing home bound patient; prorated miles actually traveled. *HCFA guideline:* This code should now be used when a single specimen is drawn from a home bound patient in his or her private residence only.

(Continued on page 4)

ELECTION RESULTS OF OFFICERS AND TRUSTEES OF THE SCMA

Following are the results of the elections which took place during the House of Delegates at the SCMA 150th Annual Meeting on Friday, April 24, 1998. All elections were by acclamation.

President-Elect:	William H. Hester, MD
Secretary:	Richard E. Ulmer, MD
Treasurer:	J. Capers Hiott, MD
Trustee, District 1:	Patrick J. Kelly, MD
Trustee, District 2 (Metropolitan):	Gerald A. Wilson, MD
Trustee, District 2:	James J. Hill, Jr., MD
Trustee, District 4 (Metropolitan):	John P. Evans, MD
Trustee, District 4:	Boyce G. Tollison, MD
Trustee, District 6 (Metropolitan):	William N. Boulware, MD
Trustee, District 6:	Kenneth L. DeHart, MD
Trustee, District 8:	Ben C. Pendarvis, MD
Trustee, District 9:	Timothy S. Llewelyn, MD
AMA Delegates:	Walter J. Roberts, Jr., MD Daniel W. Brake, MD
AMA Alternate Delegates:	S. Nelson Weston, MD Carol S. Nichols, MD

The following positions were elected at the Board of Trustees reorganization meeting on Sunday, April 26, 1998:

Chairman of the Board:	R. Duren Johnson, Jr., MD
Vice Chairman of the Board:	Boyce G. Tollison, MD
Executive Committee Member at Large:	John P. Evans, MD
Clerk:	March E. Seabrook, MD ❐

RESOLUTIONS ADOPTED BY THE SCMA HOUSE OF DELEGATES SUNDAY, APRIL 26, 1998

- *Prescribing for Treatment of Chronic Pain* was adopted as submitted. This resolution calls for the SCMA to request from the State Board of Medical Examiners guidelines and rules consistent with other states that have addressed the specific problems associated with prescribing for chronic pain and that the updated guidelines include language that will protect physicians in meeting the chronic pain needs of their patients.

- *Truth in Advertising* was amended by substitution. This resolution calls for the SCMA to continue to work with phone companies to reserve the heading "Physician and Surgeons" for those doctors with MD or DO degrees.

- There was one resolution concerning *Health Care Financing Administration (HCFA) Documentation Guidelines for Evaluation and Management (E&M) Codes* which was substituted for four other resolutions. The substitute resolution calls for the SCMA to oppose the implementation of the 1998 Medicare and Documentation Guidelines for Evaluation and Management Services as requirements because they are detrimental to the quality of patient care, decrease access, and further threaten the confidentiality of patient records.

(Continued on page 4)

PHYSICIANS CARE NETWORK UPDATE

Physicians Care Network (PCN) now has 5,901 participating physicians, 616 participating ancillary providers and 80 participating hospitals. PCN currently has 27 groups who are pending for contracts. As contracts are received, we will provide more information.

Don't forget to notify PCN when you have address, group name or tax ID number changes. Early notification will ensure that there are no claims payment delays.

Cypress Club, Inc. terminated their contract on 4/1/98.

NEW GROUPS

- The Standard Warehouse Company, Columbia; effective 4/1/98; Access/Peer Review.
- Carolina Health Centers, Greenwood; effective 1/1/98; Access/Utilization Review.
- Burton Fire District, Burton; effective 3/1/98; Access/Utilization Review.
- Color Mark, Barnwell; effective 1/1/98; Access/Peer Review.
- Hemingway Apparel, Hemingway; effective 1/1/98; Access/Peer Review.
- Kameyama USA, Inc., Spartanburg; effective 4/1/98; Access/Peer Review.
- Transition Management, Greenwood; effective 1/1/98; Access/Peer Review.

If you have questions about PCN, please contact Cindy Osborn, Network Coordinator, PCN, at (803) 798-6207, extension 257 or statewide at 1-800-327-1021. You can also send an e-mail message to cindy@scmanet.org.

SCMA WORKSHOPS

EXPLORING REIMBURSEMENT ISSUES

JUNE 4, 1998

Reimbursement issues are a major concern of medical practices today. Collecting professional fees is not always a simple matter. This workshop will explore the most effective techniques for reimbursement and collections in a busy medical practice. Without a productive billing and collecting system, medical offices cannot realize their maximum reimbursement. Participants will take home a workbook full of sample documents and effective protocols to streamline their billing and collecting procedures. **Register by May 25, 1998.**

9:00 a.m. - 4:00 p.m.; Registration: 8:30 a.m.
Columbia, Adam's Mark Hotel

NEW EVALUATION AND MANAGEMENT DOCUMENTATION GUIDELINES

JUNE 10, 1998

According to HCFA, for the indefinite future, physicians can use either the "old" (1995) Evaluation and Managment (E&M) Documentation Guidelines or the "new" (1997) guidelines in documenting E&M services. A physician can make this decision based, as HCFA states, on "whichever is more advantageous to the physician." This seminar will cover three components—history, physical examination, and medical decision making for each set of the E&M guidelines and hightlight the critical differences in the physical examination component between the 1995 and 1997 versions of the guidelines. **Register by June 1, 1998.**

9:00 a.m. - 12:00 p.m.; Registration: 8:30 a.m.
or
1:00 p.m. - 4:00 p.m.; Registration: 12:30 p.m.
Columbia, Adam's Mark Hotel

RECEPTION MANAGEMENT

JUNE 25, 1998

Your medical office staff should always be efficient, courteous, and nurturing to each patient that comes through your door. As changes in the health care environment demand that you and your staff also become faster and more competitive, frustrations mount—both for you and your patients. This seminar will help you more effectively manage patient services. **Register by June 15, 1998.**

9:00 a.m. - 4:00 p.m.; Registration: 8:30 a.m.
Columbia, Adam's Mark Hotel

Space in each program is limited, so be sure to register early. If you have any questions, please call Melissa Hamby, ext. 253, at 798-6207 in Columbia, or at (800) 327-1021 statewide, or by e-mail at melissa@scmanet.org. ❐

MEDICAID UPDATE

PEP/HOP Update: At this time there are 5,577 recipients enrolled in the 14 participating Physician Enhanced Program (PEP) sites. The PEP sites are located in Florence, Greenville, Horry, Newberry, Pickens, Richland, and Sumter counties. The Healthy Options Program (HOP) currently has 244 enrolled physicians statewide. Approximately 30 counties are represented. *If you are interested in learning more about PEP/HOP, please contact your program manager in the Department of Physician Services at (803) 253-6134.*

MEDICARE UPDATE (continued)

- P9604: Travel allowance one way in connection with medically necessary laboratory specimen collection drawn from home bound or nursing home bound patient; prorated trip charge. *HCFA guideline:* This code should now be used for nursing home patients only.

These procedure codes are also paid under the clinical laboratory fee schedule.

Part B providers will submit claims using the HCFA 1500 claim form. The place of service is the place where the specimen is drawn. Independent laboratories may not report place of service 81 (Independent Laboratory).

As a reminder, payment may only be made for travel if the beneficiary is in a nursing home or if the beneficiary is home bound. No payment may be made if the beneficiary is not home bound. In addition, neither the venipuncture nor the travel may be made if the service rendered is a finger, heel or ear stick. Additionally, the test generating the venipuncture must be medically necessary and ordered by the physician treating the beneficiary or the physician that will use the test results to treat the beneficiary. If Medicare denies the test because they determine it is not covered, they will also deny the travel and venipuncture expenses.

RESOLUTIONS (continued)

This resolution further calls for the SCMA to work with other physician organizations to define and confirm what constitutes appropriate documentation, use all available means to ensure appropriate safeguards for physicians so that documentation or inadvertent errors in the patient record that do not meet E&M coding guidelines, in and of themselves, do not constitute fraud and abuse. This resolution further calls for the SCMA to use all available means to ensure that the burden of proof for fraud and abuse lies with the prosecution and that HCFA be encouraged upon completion of the E&M Guidelines, to provide funds and time for dissemination of these guidelines and education of physicians and their personnel for guidelines usage and also a pilot study.

- *Accuracy of Insurance/Managed Care Companies List of Participating Providers* was referred to the Board of Trustees for action. The resolution calls for the SCMA to take steps to assist in mandating legislative action that protects the patient, as well as the physician from inaccurate provider lists that fail to have accurate verification safeguards and that the insurance/managed care companies be held accountable for the lack of continuity of care that may endanger the life of a patient due to inaccurate lists with no verification process.

- *Health Care Financing Administration Guidelines* was adopted as amended. This resolution calls for the House of Delegates of the SCMA to empower its staff to evaluate and share any relevant data and information on the subject of the economic impact of the current HCFA regulations regarding E&M codes and compliance programs on the average South Carolina physician's office.

- *Insurance Companies Prescribing Directives* was adopted as amended. This resolution calls for the SCMA to ask the appropriate state agency to investigate these practices as possible violation of antiracketeering laws since there is a financial arrangement between the pharmaceutical company and the insurance company that forces physicians to change their practice in a way that will potentially benefit the pharmaceutical company outside of its relationship with the insurance plan. This resolution further calls for the SCMA to ask the appropriate state agency to investigate these practices as possible violations of state prescription writing statues since these insurance programs' "substitution allowed" prescription for a competing pharmaceutical company's medication is treated differently than a prescription for the generic name medication and that the SCMA take this resolution to the American Medical Association for action since the companies involved have national scope.

- *Proper Role of the Executive Committee of the SCMA* was referred to the Constitution and Bylaws Committee for report back to the House of Delegates in 1999. This resolution calls for the SCMA Executive Committee to work within the bylaws and for the Board of Trustees to carry out responsibilities in all matters by action of the full board and not the Executive Committee. This resolution further calls for a change in the meeting times of the board if necessary.

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ANTIRETROVIRAL THERAPY, 1998*

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New insights into the pathogenesis of human immunodeficiency virus (HIV) infection emphasize its dynamic nature. The virus replicates continuously, with at least 10 billion HIV particles produced and eliminated each day. The plasma virus half-life of HIV particles is about two days, and the CD4 helper lymphocyte turnover rate may be similarly high.[1] Despite a period of several years of clinical latency in most infected individuals, there is no virological latency.[2] These observations provide a rationale for all-out attack on HIV replication by potent, combination antiretroviral therapy.[3]

The plasma HIV-RNA concentration or "viral load" has emerged as an important prognostic marker. This measurement also provides a way to monitor the success or failure of antiretroviral therapy. Two main assays for plasma HIV-RNA are the reverse transcriptase polymerase chain reaction (RT-PCR) and the branch DNA (bDNA), the latter based on signal amplification. These assays are not equivalent in their sensitivity; the RT-PCR yields numbers are, in general, twofold higher than those with bDNA. For a given patient, the same test should be used for sequential measurements of the viral load. The viral load is superior to the CD4 count as a guide to prognosis,[4] but the use of both assays is superior to the viral load alone. These are not the only prognostic markers available. The virus strain which induces syncytia (SI) in CD4 cell culture is T-cell tropic and has increased virulence.[5] Testing for SI HIV is a research tool.

The patient's genetic polymorphism is also important. A cytokine known as CCR is recognized to be an important co-factor for virus attachment and entry into the target cell.[6] Homozygous, CCR deficient individuals, a minority (<10 percent) in the general population, seem to be more resistant to infection. When heterozygous individuals partially deficient in CCR become infected with HIV, they enjoy a better prognosis. This test is of theoretical interest, but not used in patient care.

ANTIRETROVIRAL DRUGS

The introduction of more potent antiretroviral therapies during the mid-1990s seems

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Table 1. Antiretroviral Drugs* 1998.

	Names			
Category	Generic	Commercial	Abbreviation	Adult Dose† in mg. (interval-hours)
Nucleoside reverse transcriptase inhibitors (NRTI)	Zidovudine	Retrovir	AZT	300 (12h)
	Stavudine	Zerit	d4T	40 (12h)
	Didanosine	Videx	ddI	200 (12h)
	Lamivudine	Epivir	3TC	150 (12h)
	Zalcitabine	Hivid	ddC	0.75 (8h)
	Zidovudine plus Lamivudine	Combivir	AZT + 3TC	1 tablet (12h)
Non-nucleoside reverse transcriptase inhibitors (NNRTI)	Nevirapine	Viramune		200 (12h)
	Delavirdine	Rescriptor		400 (8h)
Protease Inhibitors	Saquinavir (hard gel)	Invirase		600 (8h)
	Saquinavir (soft gel)	Fortovase		1200 (8h)
	Ritonavir	Norvir		600 (12h)
	Indinavir	Crixivan		800 (8h)
	Nelfinavir	Viracept		750 (8h)

*Modified after *The Medical Letter,* Dec. 12, 1997; 39(issue 1015):111-116.

† ddI is taken 1 hour before or two hours after a meal. Indinavir is taken 1 hour before or two hours after a meal, but not concurrently with ddI. Indinavir treated patients should drink ≥ 1.5L of water daily. The remaining drugs above are to be taken with or within an hour after a meal.

to explain a significant decline in mortality rates—25 percent between 1995 and 1996. In 1997, the number of AIDS-related deaths in San Francisco was reduced by more than one-half.

Currently available antiretroviral drugs attack two sites in the biosynthetic pathway in cells infected with HIV: the reverse transcriptase (RT) and the protease step. (Table 1) The reverse transcriptase inhibitors (RTI) are either nucleosides or non-nucleosides (NRTI or NNRTI). The assembly of infectious virus requires a protease enzyme prior to its release from the cell. Drugs aimed at this step are in the class of Protease inhibitors (PI) and are more potent .[7]

Table 2. Side Effects of Antiretrovirals*

Drug		Complication†	Comment/Countermeasure‡
NRTI	AZT	Anemia	Transfusion of blood, synthetic erythropoetin
		Neutropenia	Granulocyte stimulating factor
		N/V, HA†, myopathy	D/C AZT
		Hepatitis	D/C AZT
	d4T	Peripheral sensory neuropathy	Lower dose, 30 mg every 12 hours
		Pancreatitis (rare)	
		Increase in serum aminotransferases	Observe, D/C if elevation > 200 i.u.
	ddI	Pancreatitis	D/C ddI
		N/V	May need to D/C ddI
		Peripheral Neuropathy	May need to D/C ddI
	3TC	Adverse effects uncommon	
	ddC	Peripheral neuropathy, particularly in diabetics; rash, aphthae	Usually D/C ddC
NNRTI	Nevirapine	Rash, rarely Steven Johnson's syndrome	D/C drug
		Fever, nausea, HA	
	Delavirdine	Rash (mild)	
PI	Saquinavir	Episodic N/V, diarrhea, abdominal pain and increased	Usuall no need to D/C drug
	Ritonavir	Common: N/V, diarrhea, circumoral anesthesia, altered taste, asthenia.	Many patients cannot tolerate the drug
		Rare: Renal failure, increases in serum triglycerides and cholesterol	
	Indinavir	Elevated indirect serum bilirubin to 6 mg/dL	Usually tolerated
		Kidney stones → hematuria, back, flank pain	Increased hydration usually suffices
		N/V, diarrhea, flatulence	Pancreatic enzyme supplement
	Nelfinavir	Diarrhea	Loperamide as needed.

* For abbreviations see Table 1.
† N/V = nausea/vomiting; HA = headache
‡ D/C = discontinue

Regarding the mechanisms of action, the NRTI terminate the DNA chain elongation in the provirus, which would, in uninhibited viral replication, arise from the transcription of RNA to DNA. NNRTI may work by directly adhering to the RT, as well as by inhibiting its function. The action of PI results in deficient viral particles, unfit for infecting susceptible cells, such as the CD4 helper lymphocyte.

Some confusion arises in identifying the drugs: each of them has a generic, a commercial name, and frequently, an abbreviation. Thus, zidovudine is generic, the commercial name is Retrovir and the popular abbreviations are either ZDV or (We prefer "AZT" since the drug was originally azidothymidine.). In addition to ZDV (AZT), NRTI are listed in Table 1, along with other drugs, NNRTI, and PI.

The available NNRTI are nevirapine and delavirdine. If used alone, both are subject to rapid development of resistance. Therefore, they are used in combination with other drugs. Nevirapine is chemically a dipyridodiazepinone analog, while delavirdine is a bisheteroarylpiperazine (BHAP). Toxicity and side effects from NNRTI are few except for allergy. Nevirapine is more allergenic, causing a diffuse rash in about 20 percent of patients. The delavirdine rash is less frequent and milder.

The main complications of antiretrovirals and the appropriate countermeasures are shown in Table 2. Most NRTI have bone marrow toxicity, some produce pancreatitis in a minority of patients, and some cause peripheral neuropathy. The PI class of drugs leads to an array of gastrointestinal complications, including flatulence, nausea, vomiting, and diarrhea.[8]

HIV RESISTANCE TO ANTIVIRALS

Combination antiretroviral therapy has a dual rationale: to enhance their efficacy and to avoid or postpone the emergence of resistance.[9] Determining the plasma viral load before and a few weeks after starting a drug regimen provides a practical way to test for resistance. A fall in the HIV RNA plasma count by threefold or greater is evidence of an antiviral effect, while the rise of HIV RNA by threefold or greater means that the therapy failed.

Patient compliance is essential and cannot be overemphasized. Irregular dosing and "drug holidays" facilitate development of resistance, especially with the protease inhibitors. Many drug incompatibilities, to be discussed below, can also promote therapeutic failure.

HIV isolates can now be characterized according to both phenotype and genotype with virologic and molecular methods. The phenotype reflects the sensitivity or resistance to a particular drug. The virus is grown in cell culture in the presence of varying concentration of a drug. The inhibiting concentration is thus determined. For genotyping HIV, the HIV DNA is obtained from the patient's mononuclear blood cells and analyzed in a sequenator. The DNA sequence is determined by distinct fluorescent labels attached to the four bases of DNA. The drug-sensitive and -resistant sequences reflect the genotype, which consists of triplets of DNA bases (codons), responsible for the positions of amino acids in the end product (RT or protease).

The development of HIV resistance to drugs in individual patients can now be explained by genotyping. A few weeks after the initiation of treatment with AZT alone, a mutant arises at codon 70 (the same number applies to the DNA genotype and to the amino acid position in the RT). With the appearance of a single mutation at position 70, the inhibition of the viral load becomes borderline. Continued monotherapy with AZT leads to other mutations, for example, at positions 215, 41, 70. Concurrently, the patient's plasma no longer shows an inhibition of HIV-RNA. Sequential genotyping is done for research since it is impractical and costly.

Concurrent use of AZT and 3TC results in a more pronounced antiviral effect: at four weeks there is a decrease in viral load by almost a hundredfold. As this treatment continues, the 184 mutant arises, which is associated with resistance to 3TC. Fortunately, this mutation decreases that affecting codon 215,

Table 3. HIV Resistance to Protease Inhibitors.

	HIV Protease Gene Codons*												
Drug	10	20	24	30	36	46	48	54	63	71	82	84	90
Indinavir	X†	X	X		X	X		X	X	X	✖‡	✖	X
Ritonavir	X	X				X		X	X	X	✖	✖	X
Saquinavir	X						✖	X	X	X	X	X	✖
Nelfinavir				✖			X					X	X

* Codon corresponds to the amino acid position associated with phenotypic resistance.
† Secondary mutation which may contribute to resistance.
‡ Critical mutation resulting in resistance.

which is associated with high-level AZT resistance, thereby preventing it or restoring the HIV sensitivity to AZT.[10] Thus, the viral load remains significantly suppressed, despite a persisting 184 mutant. The combined AZT + 3TC antiviral effect becomes reduced when RT gene mutations involve three codons—184, 210, and 215.

Patterns of phenotypic or genotypic resistance to the classes of NRTI, NNRTI, and PI are rarely crossreactive: HIV strains or isolates can be resistant to several NRTI, but remain sensitive to NNRTI and vice versa. Resistance to nevirapine or delavirdine tends to be cross-reactive. A single mutation at the RT gene codon 181 results in loss of sensitivity to either NNRTI.

The development of resistance to the four PI drugs is most complex and includes significant cross-resistant patterns (Table 3). The HIV gene coding for protease is subject to critical and secondary mutations. If a critical mutation affects codon 82, phenotypic resistance results to indinavir or ritonavir. A critical mutation at the codon position 30 causes resistance to Nelfinavir only. Secondary mutations are more numerous, resulting in partial resistance to a PI. A mutant at codon 84 mediates cross-resistance among the four PI.

Understanding the mutations affecting HIV may help in the selection of a treatment regimen. Should an HIV isolate show resistance to nelfinavir, other PI may be successful. On the other hand, a patient who fails with ritonavir or indinavir will fare likewise with the other member of this pair. A saquinavir-resistant HIV isolate may be cross-resistant or partially resistant to the other protease inhibitors. (See Table 6 and the discussion on "salvage therapy" under Current Recommendations below.)

STRATEGIES FOR ANTIRETROVIRAL THERAPY

Since mutations to many of the antivirals, particularly those belonging to different classes, are independent of each other, it follows that concurrent use of several drugs delays the development of resistance in the treated patient. The therapeutic superiority of the combination of indinavir, zidovudine, and lamivudine versus indinavir alone, or zidovudine plus lamivudine, was demonstrated in AZT-experienced patients.[11] Patients receiving triple drug therapy benefited by an increase in the CD4 cell counts and by a significant lowering of their viral loads. The inhibition in the HIV-RNA plasma copy count was almost a hundredfold in comparison to patients receiving indinavir alone or AZT plus 3TC without indinavir. Moreover, up to 85 percent of patients receiving triple therapy showed HIV-RNA viral counts below the level of detection!

Other drug combinations have also been shown to be effective. Thus, ddI and d4T achieved 100-fold or higher inhibitions of viral RNA in patients treated for 50 weeks.[12] Another combination, effective in naive patients, consists of d4T and 3TC. With this combination, a 30-fold inhibition of the original plasma RNA level was noted within a few weeks of treatment. Patients preexposed to d4T, and particularly those preexposed to 3TC, showed more modest decreases in the HIV RNA plasma level.[13] A triple combination of AZT, ddI, and nevirapine led to undetectable plasma viral loads in 60 to 70 percent of patients. This effect persisted for at least 50 weeks.[14]

Ongoing treatment trials comparing triple drug combinations: d4T + 3TC +indinavir (IND), d4T + ddI + IND show effects comparable to AZT + 3TC + IND. Combined treatment trials with nelfinavir or soft gel saquinavir (as PI component) also show promise. All trials involve PI-naive patients.

Monotherapies should be avoided since use of a single drug invariably leads to resistance. Several drug combinations should also be avoided or used with extra care:

1. d4T and AZT should not be used together. A deficient activation of these thymidine analogues via phosphorylation decreases the antiviral effect.
2. ddC and ddI should not be used together since they enhance each other's

toxicity (peripheral neuropathy and/or pancreatitis).

3. ddC and d4T may have an additive effect in producing peripheral neuropathy and should therefore be used together with great care.
4. ddC and 3TC is a combination of relatively weak drugs best suited for a supportive or secondary role.

Drug combinations should also be used with awareness of certain interactions.

1. Nevirapine induces the cytochrome P450 enzyme system in the liver, which reduces the level of protease inhibitors. When used along with nevirapine, the dose of indinavir may be increased by 20 percent (1000 mg. Q8H, ac).
2. Delavirdine inhibits the cytochrome P450 system, thereby increasing the level of a PI. Delavirdine and saquinavir appear to be a desirable combination since the increase in the saquinavir level compensates for its poor bioavailability. (The recently-released soft gel preparation of saquinavir has better bioavailability than the older, hard gel formulation.)
3. Saquinavir and ritonavir (each at 400 mg twice a day) is a popular combination because ritonavir increases the bioavailability of saquinavir, raising its plasma level by up to 30-fold. The greatest benefit occurs in protease inhibitor-naive patients. Hopefully, the combination of Ritonavir and the soft gel preparation saquinavir will also be effective.
4. Ritonavir should be used with awareness that a large number of drugs should not be used concomitantly—23 according to the manufacturer.[15] Thus, astemizole (Hismanal) and terfenadine (Seldane) may reach toxic levels in ritonavir-treated patients and cause the potentially-lethal ventricular arrhythmia, torsade de pointes.
5. Indinavir should not be used with terfenadine, astemizole, triazolam, metazolam, or cisapride because of enhancement of toxicity.[11]
6. Rifampin enhances the metabolism of drugs metabolized via the cytochrome P450 system and thereby reduces the efficacy of all PI. A rifampin-containing regimen against tuberculosis precludes the concurrent use of protease inhibitors.

CURRENT RECOMMENDATIONS

The updated recommendations for antiretroviral therapy in 1997 by International AIDS society and its USA panel[16] are presented in a modified form in Tables 4, 5 and 6.

Therapy is recommended for all patients with HIV RNA plasma levels above 5,000 to 10,000 copies/mL and should be considered for all HIV-infected patients with detectable HIV/RNA in the plasma. In considering the treatment of patients with low levels of RNA (below 5,000 copies) and high CD4 count (more than 500/mL), therapy may be safely deferred, with periodic determinations of the plasma HIV RNA level every three to six months, along with the CD4 cell count. Traditionally, therapy is indicated for patients with symptomatic HIV disease or when the CD4 count falls below 500 per mL, and particularly, below 350 per mL (Table 4).

Before initiating a combination drug therapy, a detailed discussion with the patient should evaluate his/her commitment and ability to follow a complex, costly, and frequently toxic treatment program. Drug holidays must be strongly discouraged since even short term non-compliance may result in development of resistant HIV.

An accepted selection for initial therapy are two NRTI and a "potent" PI, which includes the listed protease inhibitors. The soft gel saquinavir preparation qualifies as "potent," unlike the hard gel older formulation. An alternative selection is re two NRTI and a NNRTI since a combination of AZT, ddI, and nevirapine was shown to be effective.[14] (Table 5)

Major reasons for changing therapy are (1) treatment failure, as suggested by a rising plasma HIV RNA level or by a failure to reduce viral load by at least three-fold, or by a decrease in the CD4 cell count by 30 per-

Table 4. When to start treatment for HIV infection and disease*

Clinical Status	CD4 Count	HIV-RNA copies/ml (plasma)	Treatment
Symptomatic Disease†	Any	Any	Yes
Asymptomatic	<500	Any	Yes
Asymptomatic	>500	>5,000	Yes
	>500	Any	Consider

* Modified after reference 16.

† Includes any: Mucosal candidiasis, oral hairy leukoplakia, unexplained fever, night sweats, involuntary weight loss (≥10% of the premorbid weight) and episodic unexplained diarrhea.

Table 5. Options for Initial Therapy*

Regimen	Example†
NRTI - 2 drugs and PI	AZT + 3TC + a PI
	d4T + ddI + a PI
	d4T + 3TC + a PI
NRTI - 2 drugs and NNRTI	AZT + ddI + Nevirapine
	d4T + 3TC + Nevirapine

*Modified after reference 16.

† For abbreviations see Table 1.

cent or more compared to the pretreatment level; and (2) unacceptable toxicity, and/or inability to adhere to the treatment protocol. Occasionally, there is discordance between the plasma HIV/RNA level and the CD4 count after several weeks or months of therapy. That is, one measurement suggests improvement (rising CD4 count or falling viral load) while the other suggests disease progression. Failure to achieve a significant decrease in the viral load suggests the need to select a new regimen. Facing a drop in the CD4 count alone, one may either change or continue the treatment which resulted in a lower viral load.

In a case of treatment failure, one should try to change all of the patient's antiretroviral drugs or add at least two new ones (Table 6). Adding a single drug is discouraged, as it amounts to monotherapy under the guise of multidrug therapy and encourages rapid emergence of resistance to the new drug.

Particular difficulties arise with search for "salvage therapy." This occurs when a potent regimen, which includes a protease inhibitor, fails. The combination of saquinavir and ritonavir (two PI) is very effective in patients naive to PI, but may succeed or fail when

Table 6. **Options for Changing Therapy***

Initial Regimen	Subsequent Selections†
AZT + 3TC + PI 1	d4T + ddI + PI 2
	d4T + ddI + Nevirapine
	ddI + Ritonavir + Saquinavir‡
d4T + 3TC + PI 1	AZT + ddI + PI 2
	AZT + ddI + Nevirapine
	ddI + Ritonavir + Saquinavir‡
AZT + ddI + PI 1	AZT + 3TC + PI 2
	d4T + 3TC + Nevirapine
d4T + ddI + PI 1	AZT + 3TC + PI 2
	AZT + 3TC + Nevirapine
	Ritonavir + Saquinavir‡ + Nevirapine
AZT + ddI + Nevirapine	d4T + 3TC + PI 1
	AZT + 3TC + PI 1
d4T + 3TC + Nevirapine	AZT + ddI + PI 1

* Modified after reference 16.
† For abbreviations see Table 1.
‡ Ritonavir and Saquinavir 400 mg. each, at 12-hour intervals, with food.

given in sequence to a PI. After a suboptimal response to nelfinavir, ritonavir-saquinavir dual PI therapy showed promise in one recent study,[17] and less success in another.[18] The same dual PI regimen produced a therapeutic effect in a proportion of patients who were switched from indinavir. After saquinavir, the addition of ritonavir enhanced the antiviral effect.[19] This was likely due to the increased bioavailability of saquinavir, as mediated by ritonavir.

Recent studies,[17, 18, 19] as well as the clinical experience gained since the 1997 recommendations,[16] influence the options when changing therapy (Table 6). The selection of a protease inhibitor after a failed initial regimen is hard to define at the time of this writing. Nelfinavir is more likely to be effective in the initial treatment (PI 1), than the subsequent selection (PI 2 in Table 6). Indinavir, or ritonavir, if tolerated, may follow nelfinavir or saquinavir with some prospect for success. Indinavir after ritonavir, or vice versa, is likely to fail due to the overlapping resistance patterns (Table 3). When indinavir or ritonavir fails as the initial regimen, the prospect of succeeding with another single PI is dim. The most studied dual PI "salvage" combination is saquinavir-ritonavir, and it may be tried when the initial regimen with any PI fails (Table 6). The prospect for successful salvage therapy is enhanced when instituted early.

SPECIAL SITUATIONS

1. Antiretrovirals for patients undergoing chronic hemodialysis. There is insufficient

Table 7. Antiretroviral Therapy in Hemodialysis

Drug	Suggested Dose	% Renal Elimination
AZT	300 mg/d	65 - 90
ddI	25% standard dose	20 - 55
3TC	75-150 mg/d	70
d4T	?	40
Viramune	?	< 2
Delavirdine	?	50
Saquinavir	full dose	1 - 3
Ritonavir	?	11
Indinavir	?	40
Nelfinavir	full dose	< 2

data for the optimal use of antiretroviral agents with hemodialysis (Table 7). Pharmokinetic studies have been done with AZT and ddI, but involved very few patients and lacked long-term clinical observation. Lamivudine (3TC) undergoes linear renal elimination; however, the extent of removal during dialysis is uncertain. Saquinavir and nelfinavir are cleared almost entirely by non-renal mechanisms, but also lack data on effects of dialysis. Nonetheless, given the encouraging early results as already noted, and known immunosuppression associated with renal insufficiency, HIV-infected persons on chronic hemodialysis should be considered on an individual case basis for triple therapy. Limited experience suggests AZT plus ddI or 3TC; nelfinavir or saquinavir should be the protease inhibitor of choice (Table 7).

2. *Prevention of mother-infant HIV transmission.* The most important means of decreasing the number of cases of pediatric HIV infection is preventing transmission of the virus during the pregnancy and the intrapartum period. It is believed that viral transmission can occur either during pregnancy (transplacentally) or during labor and delivery. A variety of host and viral characteristics have been studied, but no single factor can account for or predict transmission. Infection of the infant can also occur postnatally through breastfeeding. The use of zidovudine (orally at a dose of 100 mg five times per day for the second and third trimesters, followed by intrapartum I.V. administration to the mother and then postpartum oral administration to the infant) has resulted in a 66 percent decrease in maternal-fetal transmission in clinical studies (23 percent of infants became infected without use of the regimen and eight percent became infected with its use). This zidovudine regimen has become standard care in community practice. A 51 percent decrease in vertical transmission has been achieved in a trial in Thailand using a slightly different zidovudine regimen starting at 36 weeks gestation, with larger oral doses during labor and no subsequent infant dosing (19 percent transmission rate without zidovudine use and nine percent transmission rate with it). This abbreviated regimen may prove useful in nations with limited resources and demonstrates the significance of the late-pregnancy/intrapartum period as a critical time for blocking maternal-fetal transmission.

If the pregnant patient is already taking combination antiretroviral therapy, many practitioners would attempt to continue the regimen after discussing the uncertainties of teratogenicity with her. Combination regimens are increasingly being initiated for newly-diagnosed pregnant patients to address issues of potential drug resistance and to generate more profound suppression of a viral load (which in theory should help limit vertical transmission even further). Enthusiasm for multi-agent regimens should, however, be tempered by the practical issues of patient adherence to a regimen of many tablets per day, drug side effects, and unknown fetal risks. As with many aspects of antiretroviral therapy, the therapeutic approach to the pregnant patient should be individualized and agents beyond zidovudine approached with caution. The non-nucleoside agent nevirapine may have a particular role in interrupting intrapartum maternal-fetal transmission. Cesarian section is not recommended as a preventative measure, although a decreased transmission rate has been recorded in some studies. Breastfeeding should be avoided, to prevent the transmission risk associated with it.

The diagnosis of HIV infection in a neonate is confounded by the presence of passively-acquired maternal antibody. The infant is followed with serial assays of antibody and viral detection (culture, p24 antigen measurement and polymerase chain reaction). Prophylactic trimethoprim-sulfamethoxazole is used until the diagnosis can be reliably excluded or the immune status of the infected infant accurately assessed. Since trials of antiretroviral therapy in pediatric patients lag several years behind those for adults, recent publications are only now addressing issues of double-agent antiretroviral therapy. It is anticipated that combination therapies including protease inhibitors will eventually be proven and incorporated into the routine management of HIV-infected children.

3. HIV Postexposure Issues. Postexposure prophylaxis (commonly called "PEP") with antiretroviral drugs is recommended and strongly encouraged for persons who have been exposed to HIV-positive blood by one of the following: percutaneous deep injury, puncture by a large bore needle used in vascular access, or prolonged large-volume mucocutaneous contact. Usually recommended are AZT plus 3TC (which can be given conveniently as Combivir, one capsule twice daily) plus a protease inhibitor (such as indinavir).

Full discussion of the many nuances of PEP is beyond the scope of this review.[20] A national Clinicians' Post-Exposure Prophylaxis Hotline (PEPline) is now available 24 hours a day (888-448-4911). In doubtful situations, and provided the possibility of early pregnancy has been addressed, giving the drugs right away is often preferable to prolonged conversation and consultation. The details of the exposure, the status of the source patient, and the indications for completing a full 28-day course of a somewhat complicated drug regimen can then be reviewed after the acute anxiety has subsided.

SUMMARY

In summary, during 1996 and 1997 important improvements occurred in HIV therapy. The introduction of new drugs benefited patients with access to these medications. The use of antiretrovirals remains complex and is rapidly evolving. This is an inspiring challenge for physicians and health workers caring for HIV-infected patients. ❐

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DYNAMIC STEREOTACTIC RADIOSURGERY: THE CHARLESTON PROGRAM: A REPORT ON THE FIRST 150 PATIENTS*

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Stereotactic radiosurgery is a technique for treating small benign and malignant intracranial tumors. There are a variety of techniques available. Suffice it to say that there are two broad techniques: Gamma Knife Radiosurgery and Linac (or linear accelerator) based radiosurgery.

The Charleston program had its origins in 1986 when a commitment developed to start a program in South Carolina. In an era in which hospitals were at times less than cooperative, the Charleston program was supported by the resources of both Roper Hospital and the Medical University of South Carolina. At that time, there were very few commercial systems available; therefore, the Charleston program evolved as a hybrid of a number of systems making it essentially unique. Neither institution had all of the many resources necessary to initiate such a program, but combined they had the multifaceted talents of physicists, engineers, computer scientists, and physicians.

The Charleston system is a linear accelerator based program that currently utilizes the McGill radiosurgery planning software as its main backbone. A set of divergent collimating cylinders were designed and manufactured locally with aperture sizes ranging in 0.5 cm increments from 0.5 cm to 4.0 cm.

The linear accelerator used is an adapted Varian 6-100 linear accelerator. The unit has been modified in order to treat with a slowly rotating couch and gantry such that the gantry rotates approximately two degrees around the patient's head per degree of table rotation along the plane of the floor. The unit has been engineered to rotate in both a clockwise and a counter clockwise rotations.

The stereotactic device employed is a Leksell stereotactic headframe. The frame has a set of fiducials which can be attached to the frame and imaged with CT/MRI and angiographic imaging. The purpose of the frame is to identify a target in three dimensional space with a Cartesian coordinating system (i.e. x,y,z coordinates) to define an isocentric point within the gross tumor volume.

A chief role for radiosurgery initially was to treat intracranial arteriovenous malformations as a way to avoid surgical morbidity and possible mortality. As utilized today, cure rates for AVMs approach 85 percent to 95 percent with this technology with low morbidity and virtually no mortality. For inoperable or unresectable AVMs, radiosurgery, often combined with embolization, has become the treatment of choice.[1]

Subsequently, the indications for radiosurgery have expanded to include the treatment of a variety of tumors including acoustic neuromas, meningiomas, pituitary tumors, ependymomas,

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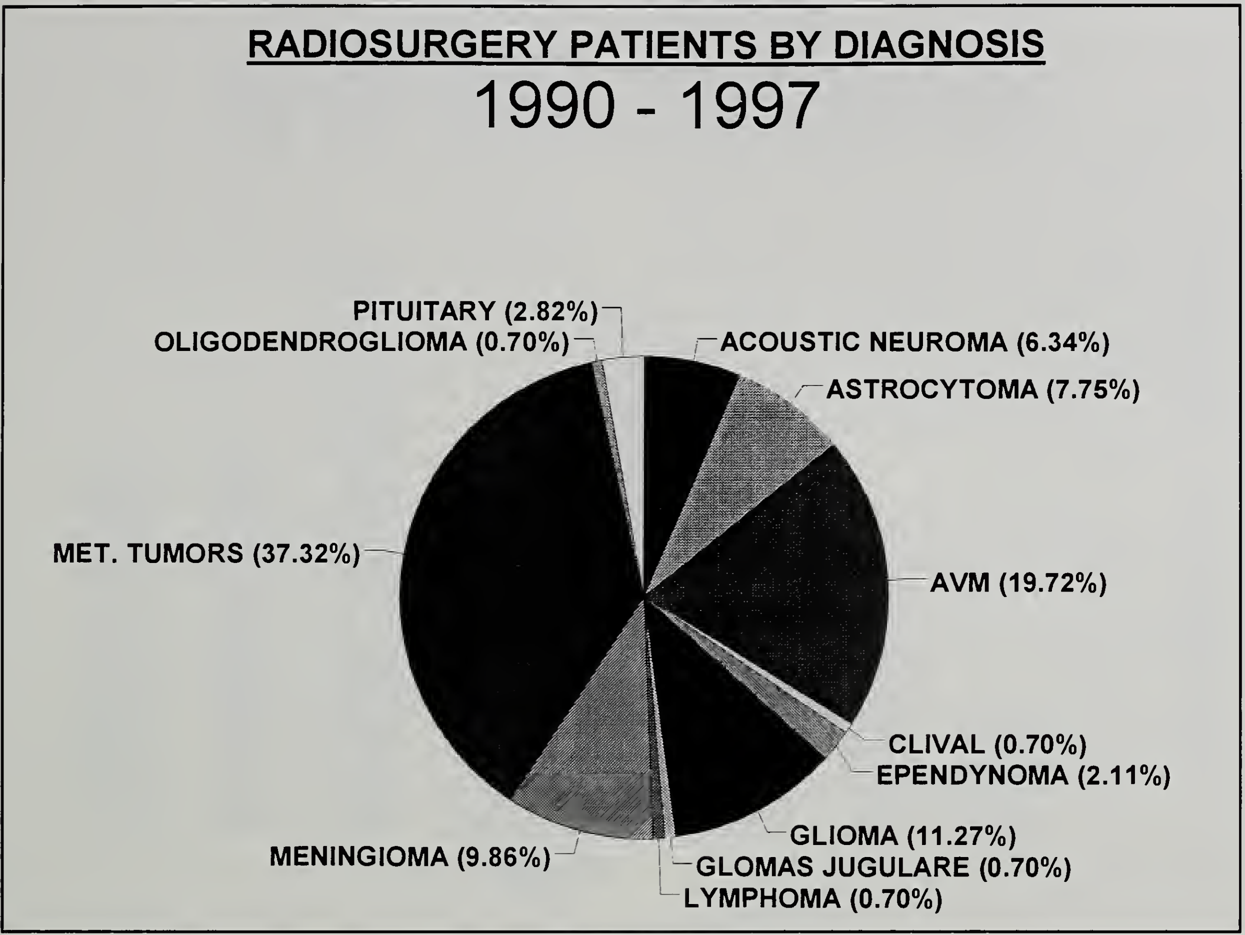

FIGURE 1

craniopharyngiomas, gliomas, and metastatic disease.[2,3,4,5] Figure I lists the Charleston experience by breakdown of disease during the initial 150 cases.

The patient demographics are included in Table I. Age has not been a limiting constraint thus far, although, general anesthesia was used in the frame placement of one child. The annual census volume is shown in Figure II. There has been an average of 23.8 patients per year since 1992 based on an extrapolation of 25 patients for the full year 1997 (currently, this is the end of the third quarter).

TABLE 1

Males	75
Females	75
Age range	14-92 years

As radiosurgery was a new treatment modality in 1990, little was known about treatment related toxicities. The initial seven patients were admitted to the intensive care unit following the procedure for close observation. As the complication rate was acceptably low, the following year, patients were admitted to the general neurosurgical floor for routine neurological checks. By the third year, selected patients were offered the procedure as an outpatient, which has been the standard since that time.

The acute morbidity has been low with only occasional nausea, vomiting and headaches as chief complaints in approximately five percent of the patients. Only one patient (0.6 percent) had associated purulence at the pin site, which responded to oral antibiotics. Occasionally, patients have suffered from periorbital

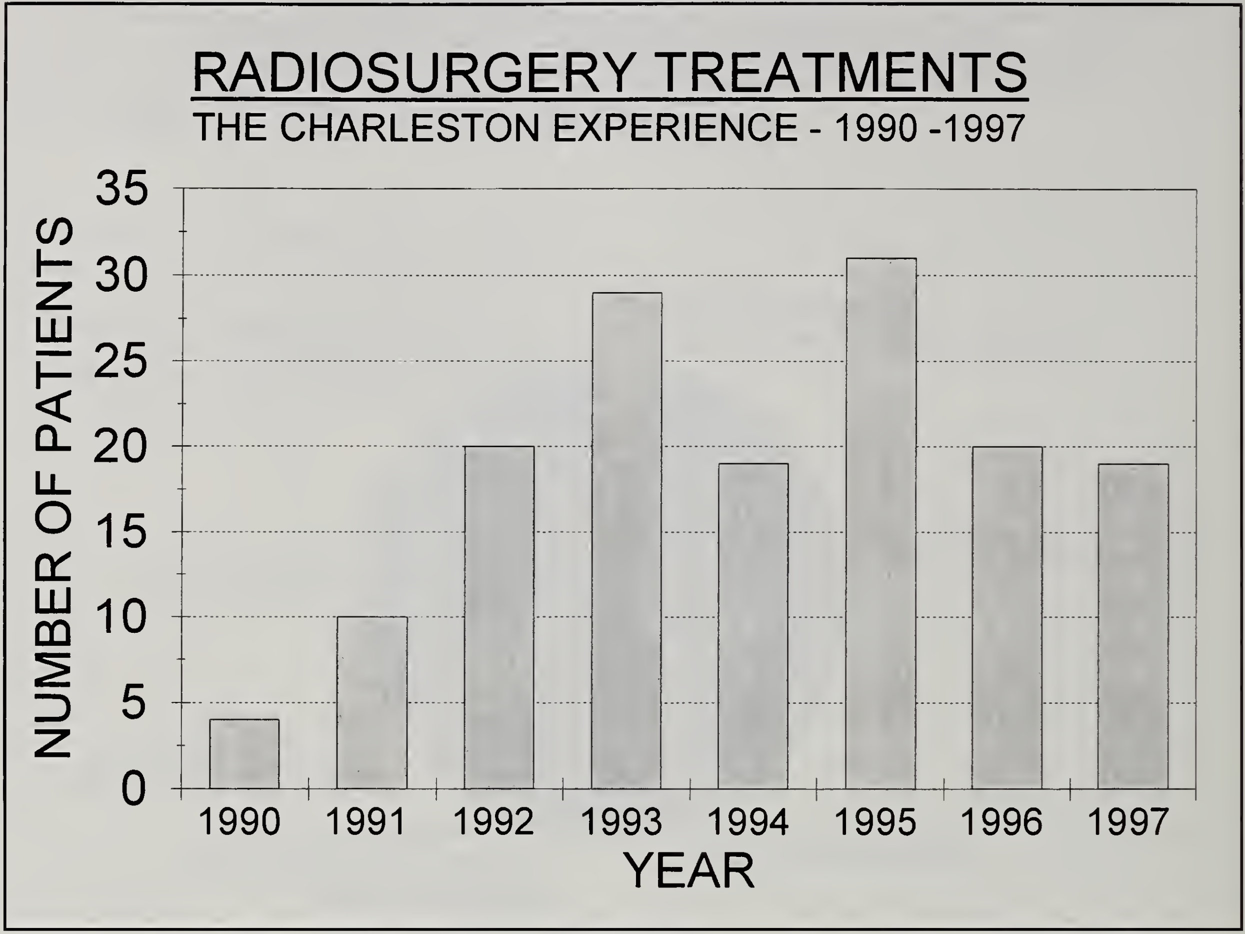

FIGURE II

edema or discoloration. But with the current pin types being used, this has been rare.

There have been no deaths directly attributable to the treatment, and no re-operations for brain necrosis have been performed as has been reported in the literature. There has been an approximately two percent incidence of chronic edema which has been symptomatic especially when associated with tumors of the cerebellar pontine angle and resulted in significant morbidity, including nausea, vomiting, dizziness, aphasia, and ataxia. These patients have responded to an extent to prolonged usage of corticosteroids and more recently pentoxifylline.

There has been a special interest in high grade gliomas. Patients with tumors 4.0 cm in diameter or less have been offered a stereotactically directed radiotherapy boost of 4.5 Gy for six fractions. To date, 25 patients have been treated as part of their primary management or at the time of recurrence with two year survival that appears superior to historical controls. When the more aggressive glioblastoma multiformes are excluded from the data, the two year survival is 78 percent (Jenrette, Worthington, et.al. in manuscript).

Excellent control has been found in brain metastases. In fact, this has become for many the treatment of choice in patients with well controlled primary disease with three or less metastases to the brain. When combined with conventional whole brain radiotherapy, control within the CNS has been maintained for the majority of the patients for the remainder of their lives. Three patients have lived long enough to have re-treatment for new foci: a small cell cancer, a malignant melanoma, and a yolk sac tumor.

Benign tumors, including AVMs, meningiomas, and acoustic neuromas are very amenable to treatment with radiosurgery. Our overall control rates mirror the reported outcomes for most tumors. These benign tumors arise from a very heterogeneous mix of patients. Most benign tumors take longer to regress than malignant ones, requiring follow-up for three to four years to determine outcome.

Results in pituitary tumors have been less satisfactory. One patient out of four with pituitary tumors has had to return for conventional radiotherapy five years after treatment. Our philosophy has been that pituitary tumors are curable with conventional, fractionated radiation and surgery. The dose limiting factor is the normal tissue tolerance of the optic chiasm, which generally falls within the 50-80 percent isodose surface of the radiosurgery resulting in doses of eight to 16 Gy in a single fraction which pushes tolerance levels of the chiasm. With fractionated radiotherapy, the chiasmal tolerance is 50-55 Gy. In this case, the risk:benefit ratio favors the fractionated, conventional radiotherapy, and we have reserved radiosurgery for recurrences of previously irradiated tumors.

SUMMARY

We have been pleased with our initial experience in an evolving program. As newer surgical and radiotherapy techniques have become available, the role of radiosurgery has been and will continue to be modified. As more commercially available systems have been marketed, the availability will become more widespread. A battery of residents in neurosurgery and radiation oncology trained in these technologies will provide leadership and future directions of this therapy. ❐

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THE MEDICAL WORKFORCE IN SOUTH CAROLINA: ITS CURRENT STATUS AND A LOOK TO THE FUTURE*

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R. LAYTON MCCURDY, M. D.

In recent years, discussions of medical workforce size and characteristics have preoccupied the leaders of academic medicine.[1-3] In general, there seems to be a consensus of opinion that the United States has too many physicians, too many specialists, too few generalists, major problems with geographic and sociocultural maldistribution of the physician workforce, and significant deficiencies in the training of physicians to practice in modern service-delivery systems.[4,5] While most authorities and physician groups agree with this assessment, there is considerable difference of opinion about possible solutions to these issues. Suggestions have included the proposed closure of 25 percent of American medical schools; dramatic cuts in the funding of graduate medical education and limiting the number of first-year graduate medical education positions to 110 percent of the number of American medical graduates; graduate medical education funding priorities that mandate at least 50 percent of trainees in primary care and the training of physicians to practice in underserved areas; sharp limitations in the number of international medical graduates accepted into graduate training programs; creation of graduate medical consortia with the authority and resources to control physician numbers and training; and a strategy of non-intervention that relies on the ultimate effect of free-market competition to right size the physician workforce.[6-12] Each of these proposed solutions has obvious implications for medical schools and teaching hospitals. Clearly, increasing pressure will be brought to bear on academic medicine to demonstrate that its trainees are being prepared in appropriate numbers and types and with the knowledge, skills, and attitudes required to serve the public in the new health care era.[13,14] This mandates that academic medicine design its educational programs in a manner that is consistent not only with its own needs but also with local, state, and national workforce requirements.

Partly guided by the national attention given to the topic, medical education institutions and state government in South Carolina have also been concerned about medical workforce issues. From 1995-1997, the Deans' Committee on Medical Education, a subcommittee of the Academic Affairs Committee of the South Carolina Commission on Higher Education, conducted a detailed investigation of the current status of medical manpower in South Carolina. In this paper, we will summarize the findings and recommendations of the Deans' Committee. We begin with a review of the method of investigation employed by the Deans' Committee, present the pertinent data examined, and conclude with a discussion of the data and recommendations for how the medical education programs in South Carolina might ensure a medical workforce of appropriate size, type, and skill to meet the needs of the state's citizens.

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* From the Deans' Committee on Medical Education, a subcommittee of the Academic Affairs Committee of the South Carolina Commission on Higher Education. Dr. Faulkner chaired the committee during 1995 and 1996, and Dr. McCurdy during 1997 and 1998; the authors hold the position of Vice President for Medical Affairs and Dean of the School of Medicine at the University of South Carolina (Columbia) and the College of Medicine at the Medical University of South Carolina (Charleston), respectively.

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METHOD OF INVESTIGATION

To assess the current status of medical manpower in South Carolina, the Deans' Committee reviewed information from the following four sources:

1. A 1995 Joint Report prepared by the South Carolina Budget and Control Board and the Commission on Higher Education on the projections for supply and demand of patient-care physicians in South Carolina for the years 2000 and 2005 under predicted managed care conditions.[15]
2. A 1995 publication of the Association of American Medical Colleges on statistical information related to medical education in the United States.[16]
3. Data supplied by the South Carolina Department of Health and Environmental Control on the number of primary care physicians per population in South Carolina in 1992, and the South Carolina Health and Human Services Finance Commission on the designated health professional shortage areas and medically underserved areas in South Carolina in 1994.
4. Data supplied by the South Carolina Area Health Education Consortium, South Carolina Department of Mental Health, Greenville Hospital System, Medical University of South Carolina, Palmetto Richland Memorial Hospital, Spartanburg Regional Medical Center, and University of South Carolina School of Medicine on the number of graduate medical education trainees in different specialties in 1995 and their predicted numbers in 1996-2000.

RESULTS

The 1995 Joint Report of the South Carolina Budget and Control Board and the Commission on Higher Education[15] based its predictions about the future supply of physicians in South Carolina on extrapolations from medical licensure data for the years 1985-1994. Predictions about future demand for physicians in South Carolina were based on how the shift to managed care might impact the use of physician services. Estimates of the population necessary to support managed care organizations with different specialty services were obtained from the literature. The state of South Carolina was then divided into four regions with each region having some potential for managed care penetration

Table 1. Comparisons of Supply and Demand for Physicians in South Carolina in 2000 and 2005 (15)

	2000				2005			
	Demand	Supply	Difference		Demand	Supply	Difference	
			N	%			N	%
Primary Care*	2,804	2,217	(587)	(21)	2,971	2,382	(589)	(20)
Specialists	2,801	3,550	749	27	2,918	4,116	1,198	41
TOTAL	5,605	5,767	162	3	5,889	6,498	609	10

*Primary Care = Family Medicine, General Internal Medicine, General Pediatrics, and Obstetrics/Gynecology

Table 2. Numbers of Medical Students, Residents, and Physicians in South Carolina, Selected Southeastern States, and the United States in 1994 (16)

	Medical Students	Medical Students/ 1,000 Pop.	Pop./ Medical Students	Residents	Residents/ 1,000 Pop.	Pop./ Resident	MDs	MDs/ 1,000 Pop.	Pop./ MD
South Carolina	208	0.06	17,043	970	0.28	3,655	7,090	1.96	510
Southeastern States*	265	0.06	16,500	1,215	0.29	3,603	9,208	2.05	499
United States	16,287	0.06	15,565	102,335	0.40	2,477	652,678	2.52	397

*Southeastern States = Alabama, Arkansas, Georgia, Kentucky, Louisiana, Mississippi, North Carolina, South Carolina, Tennessee, Virginia, and West Virginia

based on population density. Physician demand by specialty was calculated using closed-panel or staff-model HMO managed care utilization rates applied to the projected population area. Total physician demand was estimated for each of the four regions and summed to yield the state totals. Adjustments to the estimates were made to control for an increase in utilization based on the differences in demographics in South Carolina's population as compared to the population of a closed-panel HMO; an increase in utilization based on providing services to uninsured South Carolinians; an increase in utilization to make the model more representative of the independent practice association environment predicted for South Carolina rather than a closed-panel HMO environment; an increase in utilization based on predicted out-of-plan utilization by HMO enrollees; a decrease in utilization in areas of the four regions unable to sustain managed care to account for predicted increase in utilization review activities; and an increase in utilization of surgical physicians in urban areas to account for patients referred from rural areas for surgical care.

Table 1 summarizes the major findings of the 1995 Joint Report.[15] In the year 2000, the Joint Report predicts a three percent overall surplus of physicians in South Carolina, a 27 percent surplus of specialists, and a 21 percent undersupply of primary care physicians. In the year 2005, the Joint Report predicts a 10 percent overall surplus of physicians, a 41 percent surplus of specialists, and a 20 percent deficit of primary care physicians. In both 2000 and 2005, the Joint Report predicts considerable differences in both primary care and specialist supply and demand across the regions in South Carolina. The Joint Report also predicts a surplus in 2000 and 2005 for every specialty category. Furthermore, the surplus in each specialty category is predicted to increase between 2000 and 2005.

Table 2 presents the numbers of medical students, residents, and physicians in South Carolina, selected Southeastern states, and the United States in 1994.[16] South Carolina has fewer medical students, residents, and physicians than the average for the Southeastern states as well as more people per medical student, resident, or physician than the average for either the Southeastern states or the United States as a whole. Compared to South Carolina, Alabama, Mississippi, North Carolina, and Tennessee have more population per medical student; Alabama, Arkansas, Kentucky, and Mississippi have more population per resident; and Alabama, Arkansas, and Mississippi have more population per physician.

According to 1992 data supplied by the South Carolina Department of Health and Environmental Control, 15 of South Carolina's

46 counties have fewer than four primary care physicians per 10,000 population, a number that is even lower than that found in many managed care systems.[17] Nineteen hundred and ninety-four data from the Department of Health and Human Services reveals that 20 South Carolina counties are designated entirely as health professional shortage areas, 22 counties are designated partially as health professional shortage areas, 34 counties are designated entirely as medically underserved areas, and 12 counties are designated partially as medically underserved areas.

Table 3 contains the data provided by the graduate medical education programs in South Carolina concerning their overall number of residents in 1995, their number of first-year residents (PGY-1) in 1995, and their predicted overall number of residents from 1996-2000. The data are also divided into primary care and specialty categories. As can be seen in Table 3, 52 percent of the residents in South Carolina in 1995 were in primary care specialties. That number is predicted to increase to 56 percent by 2000. It is also predicted that there will be only 10 additional residents in South Carolina (one percent increase) by the year 2000. In addition, the number of primary care residents is predicted to increase by 42 (nine percent increase) while the number of specialty residents is predicted to decrease by 32 (eight percent decrease).

In 1995, the Medical University of South Carolina and the University of South Carolina School of Medicine together graduated 213 fourth-year medical students. Since Table 3 shows that there were 251 PGY-1 positions available in South Carolina in 1995, the number of PGY-1 positions in South Carolina was 118 percent of the number of medical school graduates.

DISCUSSION

We believe the data we have presented warrant several conclusions:

(1) South Carolina currently has about the total number of physicians it needs, and its physician supply will probably be adequate in number for the foreseeable future. Given the limitations of the models used to measure medical workforce needs,[2,3] the predictions in Table 1 of a three percent surplus in 2000 and a 10 percent surplus in 2005 suggest a very modest future oversupply of physicians in South Carolina. In fact, these numbers may actually turn out to be overestimates. Recent

Table 3. Numbers of Graduate Medical Education Trainees in South Carolina in 1995 and Predicted Numbers in 1996-2000

	1995		1995 (PGY-1)		1996		1997		1998		1999		2000	
	N	%	N	%	N	%	N	%	N	%	N	%	N	%
Primary Care Trainees*	463	52	172	69	467	53	472	55	488	56	501	56	505	56
Specialty Trainees	421	48	79	31	410	47	389	45	389	44	389	44	389	44
TOTAL	884		251		877		861		877		890		894	

*Primary Care Trainees = Family Medicine, Internal Medicine, Pediatrics, and Obstetrics/Gynecology information from the Budget and Control Board indicate that the penetration of managed care into South Carolina may actually be occurring at a slower rate than predicted in the model it used to estimate physician demand.[15] If true, then the model's results would underestimate the number of physicians required in 2000 and 2005. The data in Table 2 comparing the number of physicians in South Carolina with other states in the Southeast and with the entire country also lends support to the conclusion that South Carolina is not oversupplied with physicians. While the medical workforce in South Carolina may well have been inadequate for previous models of health care delivery, it appears to be sufficient in number for the new era of managed care.

(2) There is a current shortage of primary care physicians and a surplus of specialists in South Carolina, and this imbalance is likely to persist well into the next century. As a matter of fact, Table 1 suggests that by 2005 the supply of primary care physicians in South Carolina will remain stable at about 20 percent less than demand, but that the supply of specialists will increase until it is more than 40 percent greater than demand. While Table 3 does indicate an increase in the number of primary care trainees and a decrease in the number of specialty trainees over the next few years, those changes are unlikely to be large enough to alter the above predictions.

(3) There is considerable maldistribution of the physician workforce in South Carolina. The magnitude of the shortage or surplus of primary care physicians and specialists varies considerably from area to area in South Carolina, and this trend is predicted to continue for at least the next decade.[15] In addition, despite what appears to be adequate overall numbers of physicians in South Carolina, the data we reviewed indicates that many counties are undersupplied (less than 4.0 primary care physicians per 10,000 population) and most have major regions that are formally designated as health professional shortage areas or medically underserved areas.

(4) The medical education system in South Carolina appears to be training about the correct number and type of medical students and residents. Predictions of the adequacy of the future physician workforce by the model used to generate the data in Table 1 were based on the assumption of a relatively stable medical education system in South Carolina.[15] The data in Table 2, comparing the numbers of medical students and residents in South Carolina with those from other states in the Southeast and with the entire country, also suggest that South Carolina does not have excessive numbers of medical trainees. As shown in Table 3, South Carolina's graduate medical education system already consists of greater than the recommended 50 percent primary care trainees.[6,7] The number of PGY-1 positions in South Carolina's teaching hospitals in 1995 was 118 percent of the number of students graduating that year from the state's two medical schools and, therefore, greater than the figure of 110 percent that has been recommended by some national medical organizations.[6,7] A closer analysis, however, reveals that the extra eight percent of PGY-1 positions only equals 17 additional positions.

(5) The graduate medical education system in South Carolina is changing in a manner that emphasizes the training of more primary care physicians and fewer specialists. According to Table 3, by 2000, primary care trainees are expected to increase from 52 percent to 56 percent of the entire graduate medical education system in South Carolina. It is important to note that these changes are occurring without significant manipulation of the system itself. The medical students appear to be selecting primary care training because they believe those specialties will offer them the greatest opportunities for future professional satisfaction and financial security.

The above data and conclusions suggest several recommendations for South Carolina's medical education programs.

First, the total number of undergraduate and graduate medical education positions in South Carolina should be capped at 1995 levels pending evidence sufficient to warrant either an increase or decrease in those numbers.

Second, data pertinent to the medical workforce, including the impact of non-physician health care professionals, should be reviewed on a regular basis and used to determine the available number of undergraduate and graduate medical education positions offered in South Carolina.

Third, specific strategies should be developed to downsize and/or consolidate certain subspecialty education programs in South Carolina.

Fourth, medical students should be encouraged to train in primary care and other specialties needed in South Carolina.

Fifth, strategies should be developed to encourage graduates of medical education programs to practice in medically underserved areas of South Carolina.

Sixth, specific initiatives should be developed to enhance the diversity of the trainees in South Carolina's medical education programs.

Seventh, the curricula of South Carolina's medical education programs should be examined to ensure that graduates are being adequately prepared to meet the present and future health care needs of South Carolinians.

Eighth, the medical education institutions in South Carolina should coordinate their programs to assure that they are as effective and efficient as possible.

SUMMARY

Available data suggest that South Carolina does not have the same degree of problems with its medical workforce as is present in many other areas of the country.[1,11] While there may be too many specialists and not enough primary care physicians and while maldistribution is also a problem in some areas of the state, it appears that the total number of physicians and the size and focus of the medical education system in South Carolina are about what they should be. Furthermore, the graduate medical education system in South Carolina is currently changing on its own to emphasize more primary care and less specialist training. With careful monitoring, coordination of effort, and specific initiatives to address specialty, maldistribution and curricular issues, the state's medical education programs can take action to build on their current strengths and assure a medical workforce of sufficient size, type, and skill to meet the future needs of the citizens of South Carolina. ❒

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Editorials

RIGHTSIZING THE HEALTHCARE WORKFORCE

The late Joseph I. Waring, MD, long-time editor of this journal, had a wonderful flair for the English language and was quick to defend it against transgressions. He protested the common practice he called "verbing a noun." I suspect he would also protest today's widespread penchant for making one word out of two. It is therefore with tongue in cheek (or elbow on keyboard) that I've used "rightsizing," "healthcare," and "workforce" in the title of this editorial to suggest a point: Namely, this subject is far from straightforward despite the proclamations of various policymakers (here we go again!). In this issue of *The Journal*, Drs. Larry R. Faulkner and R. Layton McCurdy, deans at South Carolina's two medical schools, draw some reassuring conclusions.

Drs. Faulkner and McCurdy conclude that South Carolina has fewer medical students, residents, and physicians in relation to the population than is average for the Southeastern states or the United States as a whole. Moreover, 52 percent of residents now training in South Carolina are in primary care specialties, which meets the expressed national desideratum that one-half of graduating medical students should enter primary care (the so-called "50 percent solution"). Also, the number of first-year residency positions (PGY-1) offered in South Carolina in relation to the total number of graduating students seems about right. Nationally the number of PGY-1 positions is 140 percent of the number of graduating medical students, but South Carolina's ratio (118 percent) is close to the proposed "110 percent solution" designed to correct this disparity. Drs. Faulkner and McCurdy also review physician distribution in the Palmetto State and conclude that "available data suggest that South Carolina does not have the same degree of problems with its medical workforce as is present in many other areas of the country."

Still, this subject will continue to be contentious (as it has indeed been throughout recorded history). Here we shall pose three rhetorical questions: (1) Should the solutions be national or regional? (2) Do the solutions lie in primary care or specialty training? (3) How will the solutions be impacted by the growing supply of nonphysician healthcare providers?

Should the solutions be national or regional? On the surface, recommendations of various national committees make a great deal of sense. If the number of PGY-1 positions offered in the United States were only 110 percent of the number of graduating medical students, then we would approximate a steady-state between physician supply and demand. If 50 percent of graduating medical students could be enticed to primary care, then the overemphasis on expensive technology might be curbed. For reasons that are largely political, implementing these recommendations will be akin to belling the cat. Yet the solutions must ultimately be national because doctors, like everyone else in our mobile society, go where the jobs are.

The solutions must remain national unless there are radical changes in the way healthcare and medical education are financed. The Canadian experience is often cited since their healthcare financing is delegated to the provinces. The Canadian provinces developed policies to limit medical school enrollments, adjust specialty mix to better accord with needs, and establish incentives for physicians to practice in underserved areas.[1] However, the surge of physician emigration from Canada may actually cause a shortfall of physicians by the early decades of the 21st century.[2] The Canadian experience may become relevant for the United States since it is widely predicted that federal funding for graduate medical education will be reduced. Still, national solutions should be sought if only to reduce the possibility (already predicted) that physicians will wander the country like nomads, alone or in groups, seeking opportunities to utilize their long and expensive training.

Do the solutions lie in primary care or specialty training? Drs. Faulkner and McCurdy properly emphasize the role of primary care and observe somewhat cryptically that there should be downsizing and/or consolidation of "certain subspecialty programs in South Carolina." The oversupply of physicians in certain specialties and subspecialties is, however, again a national problem. Various specialities and subspecialties are already addressing these issues through their councils, residency review committees, and certifying boards. In some specialties—head and neck surgery is a good example—it seems that there will be a steady-state between supply and demand.[3] In other areas—gastroenterology is a good example—voluntary downsizing by prospective trainees is in full force even while national councils urge reductions.[4] Young physicians are unlikely to keep on training for jobs that aren't there; at least to some extent "the morrow will take care of itself."[5]

The second and larger issue concerns the extent to which 21st-century Americans will prefer primary care versus specialty and subspecialty care. Eloquent spokespersons for both views can be found within medicine. Thus Eric Cassel, in *Doctoring*, argues that the primary care movement "represents a shift away from the idea that has occupied twentieth-century medicine: that it is impersonal objective medical science that knows the disease and effects the treatment."[6] On the other hand, John D. Lantos, in *Do We Still Need Doctors?*, observes that when his father (an internist) gets sick, "he chooses the best specialist, and when the problem is fixed, he never goes back. Perhaps that's how the informed patient of the future will behave."[7] Medicine is one of the few areas in society in which today's policymakers stress generalism over specialism. In most other areas, the workforces are becoming more specialized in response to an information-rich, knowledge-based environment. Americans' appetites for technology are likely to shape their expectations of the healthcare system.[8] Reduction of medicine to technology delivered by strangers offends most of us, but it could well be that this is what most people will not only accept but even demand.

How will the solutions be impacted by the growing supply of nonphysician healthcare providers? Cooper's projection of current data to the year 2020 led to the conclusion that there is no major impending national surplus of physicians. However, the number of "nonphysician clinicians" is likely to double by the year 2010, equaling 60 percent of the number of physicians in patient care. It was concluded that the key determinant of whether we will have physicians surpluses will be the extent to which patients utilize physicians for services that are also offered by nonphysician clinicians.[9] It is no secret that nonphysician clinicians are seeking and often getting their independence.[10] Also, on the horizon is an abundance of practitioners of alternative medicine such as chiropractors, naturopaths, and practitioners of Oriental medicine. By one prediction, the per capita supply of these latter persons will grow by 88 percent by the year 2010, while the physician supply will grow by only 16 percent.[11] Can there be any doubt about the importance of organized medicine?

There are of course many other issues. Suboptimal distribution of physicians is an issue in South Carolina as it is elsewhere; physicians gravitate toward the larger metropolitan areas.[12] Affirmative action is an issue in South Carolina as it is elsewhere; minority and women physicians are much more likely to serve minority, poor, and Medicaid populations.[13] My main point is that this subject will remain controversial, as perhaps it should be given the ever-changing complexion of our calling. In the meantime, we can be grateful to Drs. Faulkner and McCurdy for analyzing the data in South Carolina and for reassuring us that, all in all, we are "about right" in relation to our peers.

—CSB

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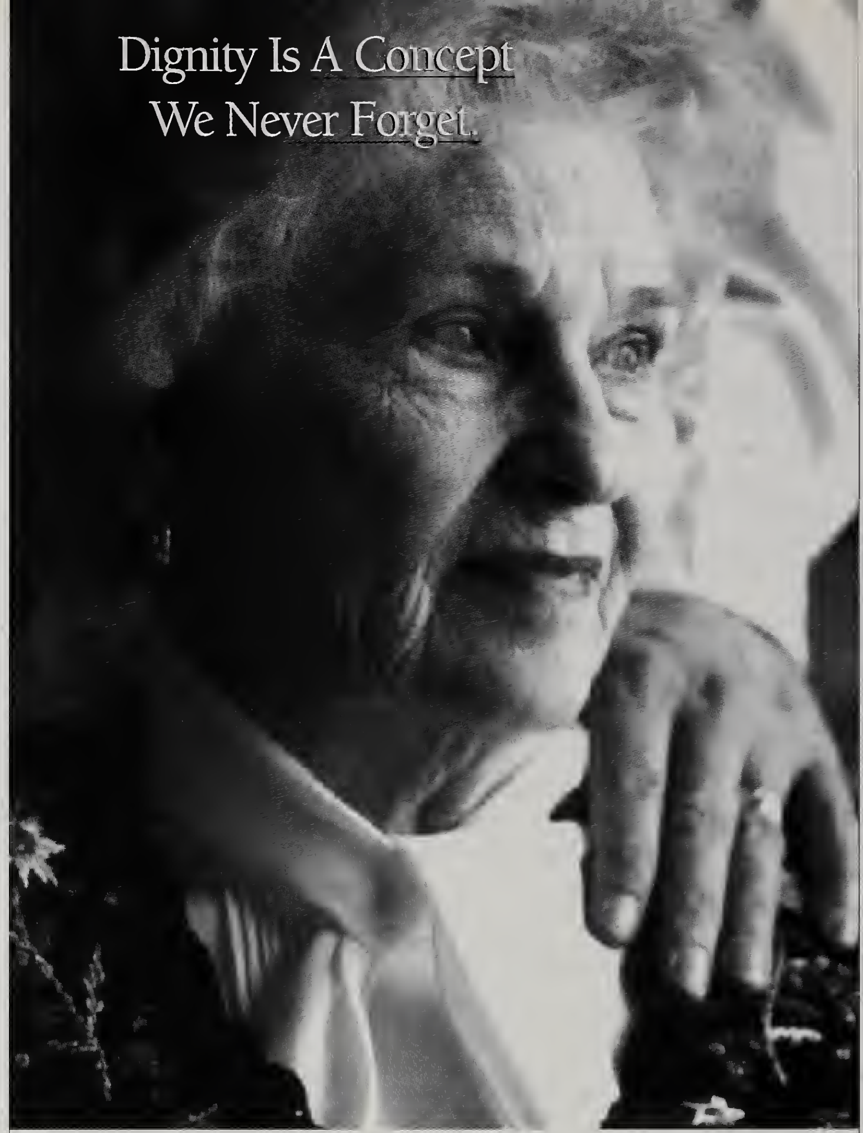

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On the Cover:

IN THE NEWS IN 1948...

Israel is created...Dixiecrats nominate Strom Thurmond for President...Truman asks voluntary restraint of gas and oil use...tax reduction is voted over Truman's veto...Mahatma Gandhi is assassinated by a Hindu extremist...a Buick Roadmaster costs $2,900; a Packard costs $4,300; and a Rolls-Royce convertible costs $18,500. Academy Awards went to *Hamlet* for Best Picture; John Hutson, best director for *The Treasure of Sierra Madre*; Jane Wyman, best actress for *Johnny Belinda*; Laurence Olivier, best actor for *Hamlet*. The Pulitzer Prize was won by Tennessee Williams for *A Streetcare Named Desire.*[1]

The Journal of the South Carolina Medical Association reports that: "South Carolina is making progress in her efforts to deal with problems related to medical care...." and "the Legislature passed an Act...providing the machinery to be used by the State in obtaining, and in the administration of the funds made available by Congress under the Hill-Burton Act."[2]

Pictured on this month's cover of *The Journal* is the class that graduated from the Medical College of the State of South Carolina—in the news in 1948.

Jane McCutchen Brown
Curator, Waring Historical Library

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Alliance Page

PRESIDENT'S ADDRESS TO THE SOUTH CAROLINA MEDICAL ASSOCIATION ALLIANCE HOUSE OF DELEGATES

April 23, 1998

Today, I humbly stand before you filled with enthusiasm, excitement, and trepidation. I am filled with enthusiasm for the wonderful opportunity we have this year to continue to make a difference. I am excited about all of you who are here and willing to work together to make those opportunities happen. I feel a sense of trepidation to follow in the footsteps of so many women I have worked with and admire. Those who have preceded me have been an inspiration and have set a tone and direction that has kept the small state of South Carolina active and vocal in our national organization. I have been a part of this organization for 22 years. I began as a resident spouse in Pennsylvania so when we moved to South Carolina to begin our practice, I had some idea of what the medical auxiliary was all about. A dear Southern lady named Marion Erdman gently encouraged me to attend a few meetings and consider joining. Here I am, 18 years later, proudly representing my county and our state. If I can borrow a sentiment from the play *You're a Good Man Charlie Brown*, this is happiness, and for me **Happiness is Caring, Sharing and Daring to change**.

As I look around the room, I see many faces that I know and many more that I hope to get to know. As I look at you, I am acutely aware that no matter how many differences we have, we all have one thing in common—we all are married to heroes. Oh, not the John Wayne or Harrison Ford type, but a person who day after day fights for the lives and rights of their patients.

I never really thought about it until one day we were at my son's PeeWee basketball game. When the game was over, a young woman with two children came over and put her arms around my husband and hugged him. She then turned to me and seeing the surprised look on my face said, "Your husband made it possible for me to be here today enjoying my son's basketball game. I will always be grateful for that." My husband played it down, but I then became more aware of how important physicians are in people's lives. Everyday they are improving life, prolonging life, and helping us come to terms with losing life. It is not an easy job, and I don't for one minute believe that most of your spouses are in it only for the money. They are too smart for that. There are too many great jobs out there that pay well, and at five o'clock one can go home and forget about it. Therefore, I truly believe that we are married to unsung heroes.

As I look at my hero and his colleagues, I know how much they care about their patients. I realize how much as physician spouses, we also care. We care for our mates, we care about their patients, we care about the community, and we care about medicine. If we did not care, we would not put up with cold dinners or dinners without daddy. We would not put up with attending children's activities alone, nor would we put up with missed social engagements or canceled vacations. Because we do care, we are willing to share. First, we share our spouses daily with their patients. We share our time as volunteers to raise funds to support medical scholarships to ensure physicians for the future, and we raise funds for the health-related needs of our communities. We share our talent by working in our communities on legislation, and we promote medicine by educating the public on health-related issues. As Johnnie Amonette said, *"We are an army of volunteers, who are committed to medicine and who are willing to work for a cause we believe in which is preserving the ART OF MEDICINE."*

There is an old Chinese curse that goes *"May you live in interesting times."* These are certainly interesting times. All of us are affected by it. We are witnessing changes daily in health care, in the way it is being legislated, in the way it is being restricted, and in the way it is being practiced. This tends to give the impression that medicine is out of control, which leads to insecurity, confusion and a sense of helplessness. However, change does not have to be a curse. We can make a difference by being involved for ourselves and for our spouses. We know that it is better to light one candle than to curse the darkness, but if we all light our candles together it can be blinding. As Theodore Roosevelt wrote:

> *"The credit belongs to those who are actually in the arena, who strive valiantly, who know the great enthusiasm, the great devotions, and spend themselves in a worthy cause; who at the best, know the triumph of high achievement; and who, at the worst, if they fail, fail while daring greatly, so that their place shall never be with those cold and timid souls who know neither victory nor defeat."*

Therefore, I propose that we work together and encourage others to join us. By being involved, we can dare to change. If we are involved we will help to shape that change to benefit patients, our communities, and secure a bright future for medicine.

Let us remember that **HAPPINESS IS CARING, SHARING, AND DARING TO CHANGE**. We all **care** or we would not be involved. We all are willing to **share** our time, talents, and treasures with others, or we would not be here today. And we need, in this time of uncertainty, to be the ones who **dare to change**.

M. Alexis Alia (Mrs. Richard T.)
President, SCMAA 1998-1999

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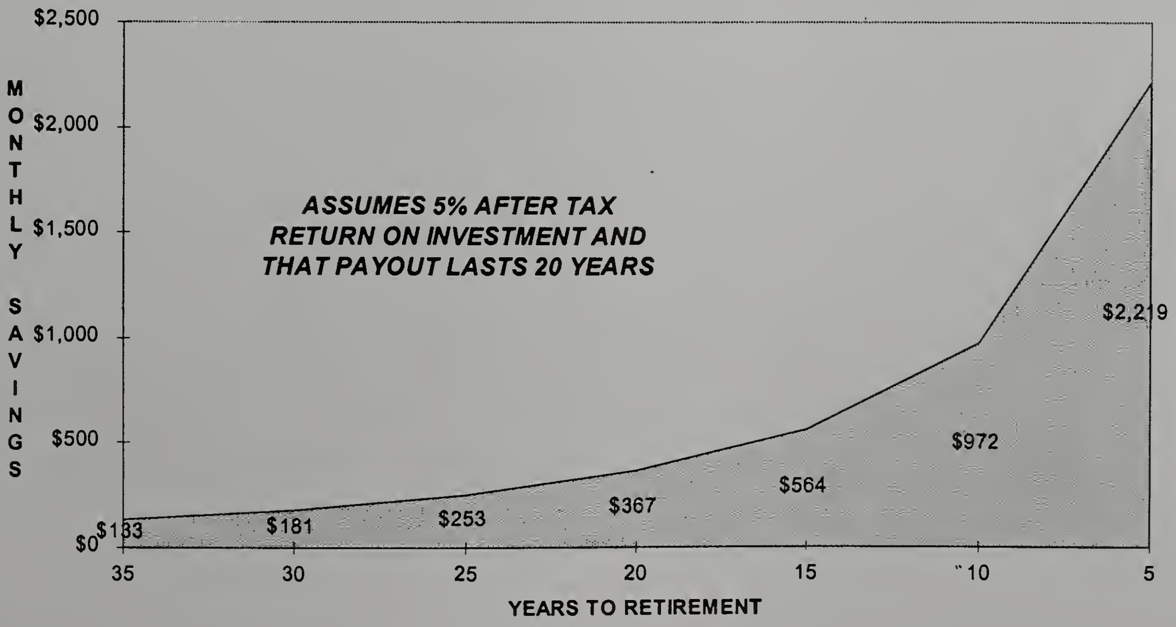

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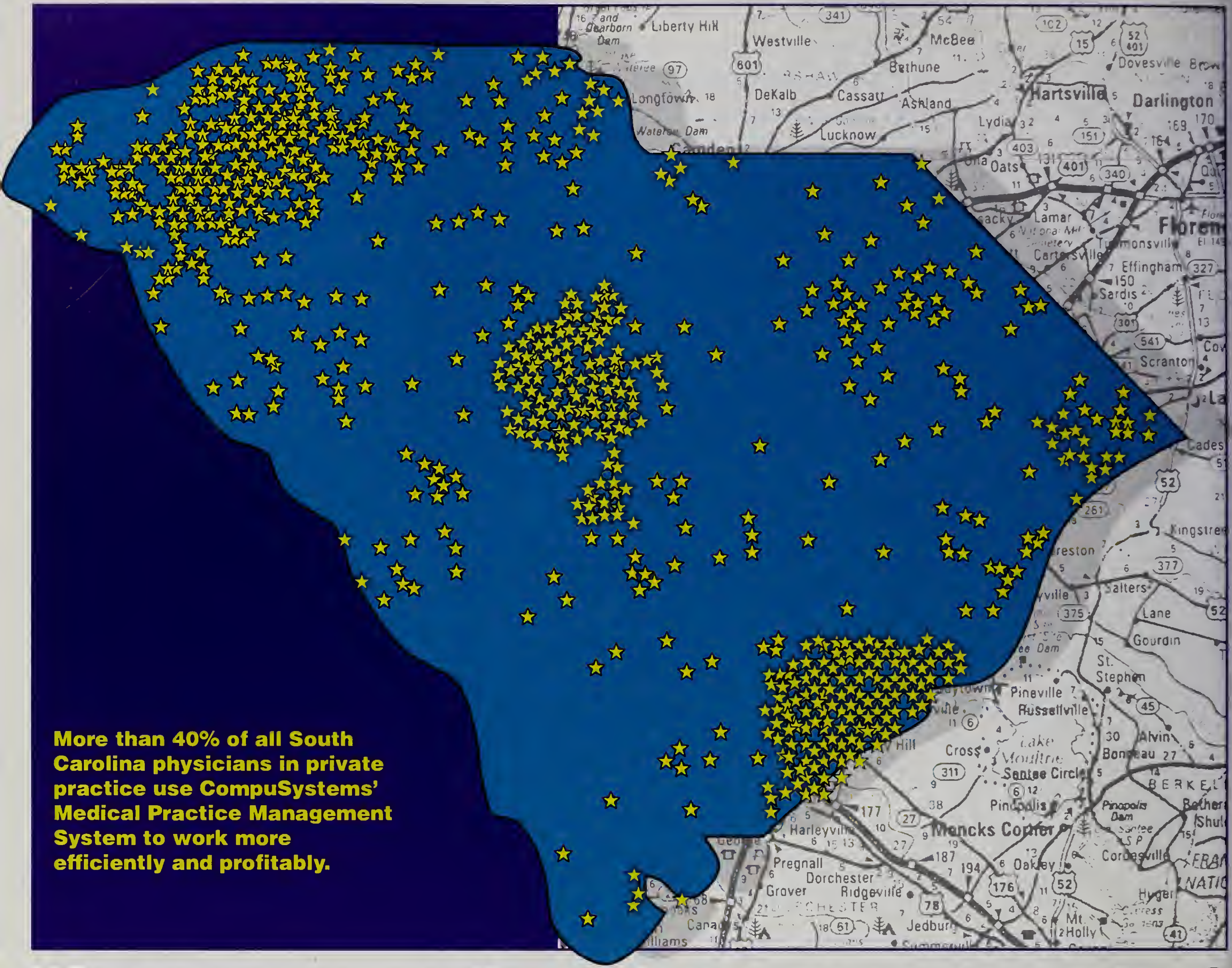

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SPECIAL ISSUE: WHAT'S NEW IN CANCER

GUEST EDITOR: J. DAVID OSGUTHORPE, M.D.

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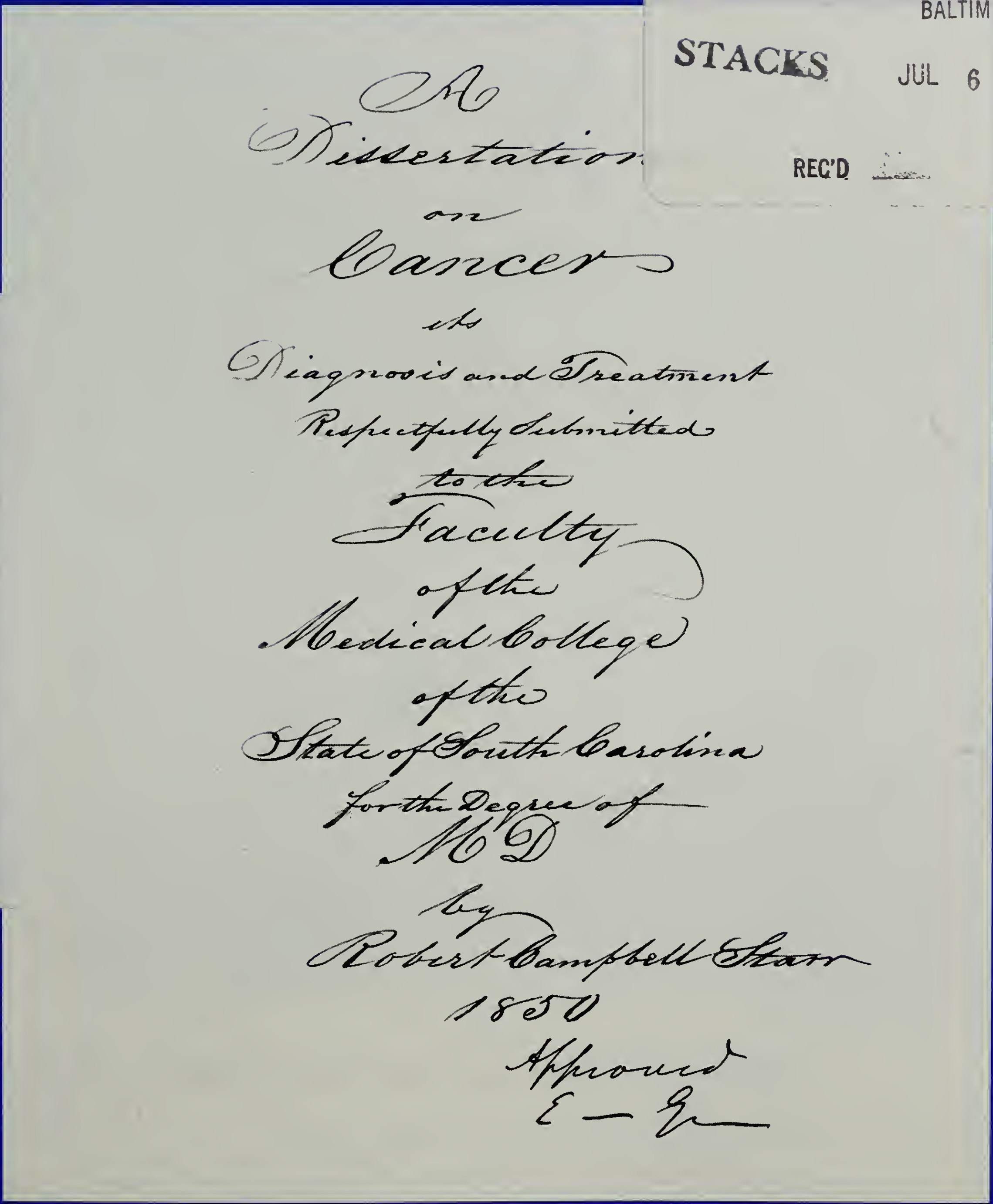

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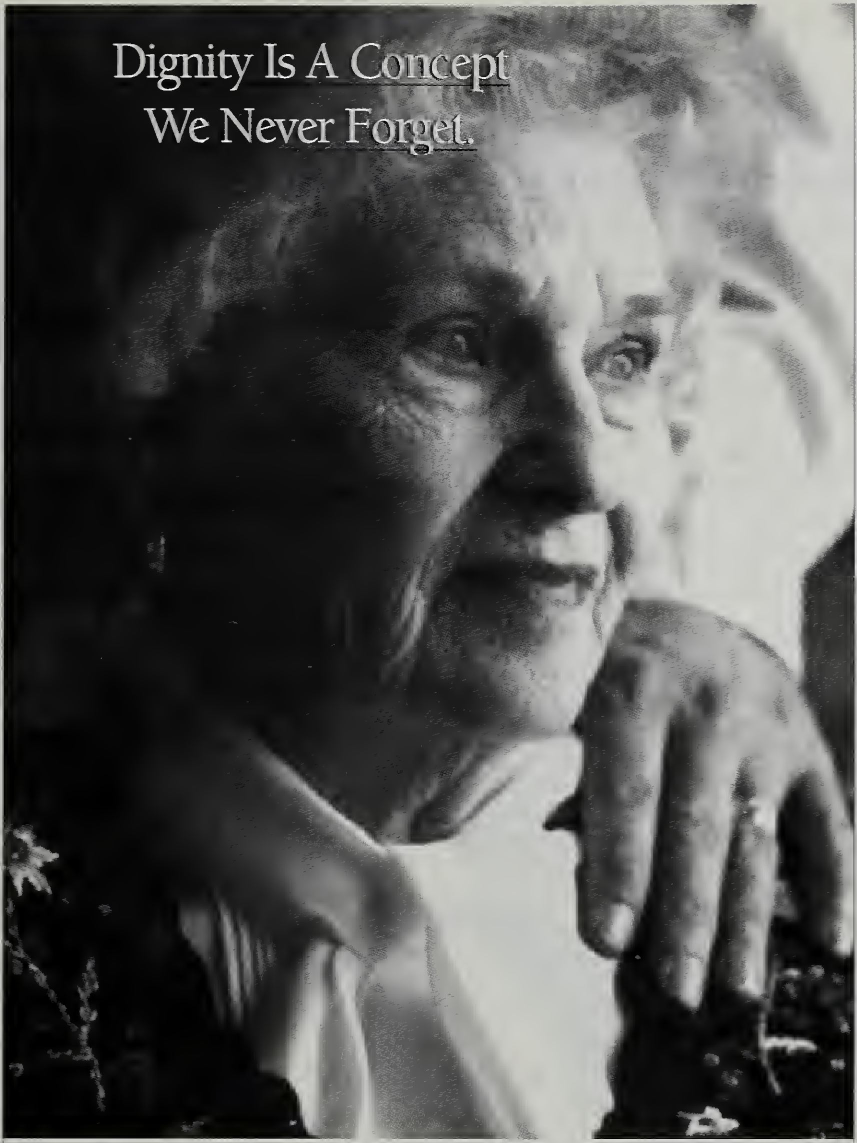

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President's Page

E&M CODING

With the advent of computer technology, several medical organizations perceived the practical need for a system of procedure and diagnosis information coding. Several state and national organizations vied to create a single, national system, but it became evident that the American Medical Association (AMA) was best suited for the job and so the Current Procedural Terminology (CPT) was born. With the help of many physicians and specialty societies, the CPT codes were developed.

The focus of the original CPT was to provide computer compatible codes for every medical or surgical procedure, including cognitive interactions. The cognitive codes are now called Evaluation and Management (E&M) codes so that all insurance filings across the country would be uniform. The ICD-9 codes provide the same on the "diagnosis" side. But with the advent of the Harvard and the Health Care Financing Administration (HCFA) Resource Based Relative Value System (RBRVS), so named because each code was assigned monetary value based on relative amounts of work and of practice overheads to a standard, the emphasis of CPT changed. Under the RBRVS system, each CPT code became the basis for calculating the RBRVS value.

In a certain sense, the procedure codes are straightforward in that barring complications, a right heart catherization is a right heart catherization no matter where it is performed or by whom. But such is not the case for E&M codes. Several physicians and eventually the AMA began to realize in the early 1990s (shortly after introduction of the RBRVS as a reimbursement mechanism) that both government and private insurers were reimbursing for the E&M codes differently in different jurisdictions, and in many cases, not reimbursing at all for the higher level codes (level 4 or 5) or there was "downcoding."

The AMA then convinced HCFA (and by default, the insurance industry) to work with them to develop E&M coding documentation guidelines to "capture" the amount of relative work appropriate to each code (they used representative clinical vignettes). The original documentation guideline effort was undertaken in 1994 and then revised again in 1997. But an unintended factor intervened to throw this otherwise well-intentioned and "noble" AMA and specialty society effort off track. The Inspector General and the Federal Bureau of Investigation announced in 1996-1997 that a special task force would be created to root out medical fraud which was suspected of siphoning billions of dollars out of the Medicare system. And guess what? One of the tools to assess and analyze for fraud would be the medical record and its corresponding reimbursement coding correlations (i.e., does the documentation justify the code?).

The AMA is now working to correct or react to the new situation necessitated by the fraud and abuse investigations. The original deadline for initiating the new guidelines was July 1, 1998. However, HCFA has agreed to allow physicians to continue to use either the "old" (1995) E&M guidelines or the "new" (1997) guidelines, "whichever is more advantageous to the physician." No new deadline for further changes or final implementation has been announced.

So stay tuned. On the other hand, I urge that we all carefully and thoughtfully document our work, our findings, our diagnosis, our treatments, and our reservations. I think with current technology, much of this can be easily accomplished.

Stephen A. Imbeau, M. D.
President

The Journal™ OF THE SOUTH CAROLINA MEDICAL ASSOCIATION

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Contact the Medical College of Georgia, Division of Continuing Education at (800) 221-6437 for other activities.

July

Monday – Thursday July 13-16, 1998
Sea Island, GA: The Cloister
18th Annual Obstetrics and Gynecology
SPONSOR: School of Medicine, Medical College of Georgia
TARGET AUDIENCE: Obstetricians, gynecologists, and primary care physicians
TUITION: $550
CONTACT: Division of Continuing Education; (706) 721-3967 or (800) 221-6437
CREDITS: 16 hours, AMA Category 1

Friday – Sunday July 17-19, 1998
Myrtle Beach, SC: Kingston Plantation
Family Practice Weekend
SPONSOR: South Carolina Academy of Family Physicians
DESCRIPTION: To enhance the physician's ability to care for patients by providing information designed to maintain and improve the ability of family physicians to provide high-quality patient care.
TARGET AUDIENCE: Family physicians, nurse practitioners, residents
FACULTY: Stoney Abercrombie, MD; William Cefalu, MD; Douglas Conway, MD; Evan Eckman, MD; Dennis Fryed, MD; Gerald Jebailey, MD; Kelly Jones, PharmD; Kit Kuss, MD; Ronald Lewis, MD; Mike Pickering, MD; Sharm Steadman, PharmD; Rod Walters, PhD; and Michael Willis, MD
TUITION: $170 members, $200 non-members, residents and students fee waived
CONTACT: Donna Franklin; (864) 984-7237
CREDITS: 12 hours, AMA Category 1

AUGUST

Thursday – Sunday August 13-16, 1998
Hilton Head Island, SC: Hilton Resort
South Carolina Chapter of the American Academy of Pediatrics Annual Meeting and Scientific Program
SPONSOR: Roper Hospital and SC Chapter of the American Academy of Pediatrics
TARGET AUDIENCE: Pediatricians
FACULTY: Russell W. Steele, MD; Robert D. Hunt, MD; Gary B. Ewing, MD, MPH; Paul M. Darden, II, MD
CONTACT: Debbie Shealy; (803) 798-6207 or (800) 321-1021, ext. 223

Friday – Tuesday August 21-25, 1998
Sea Island, GA: The Cloister
8th Annual Sleep Disorders
SPONSOR: School of Medicine, Medical College of Georgia
TARGET AUDIENCE: Family practitioners, general practitioners, neurologists, otolaryngologists, psychiatrists, and pediatricians
TUITION: $550
CONTACT: Division of Continuing Education;

(706) 721-3967 or (800) 221-6437
CREDITS: 25 hours, AMA Category 1

SEPTEMBER

Friday – Sunday September 11-13, 1998
Asheville, NC: Grove Park Inn
South Carolina Society of Pathologists Annual Meeting and Scientific Program
SPONSOR: Roper Hospital and South Carolina Society of Pathologists
TARGET AUDIENCE: Pathologists
FACULTY: Keith E. Shults, Vice President of Technology Transfer, Cytometry Associates, Inc.
CONTACT: Debbie Shealy; (803) 798-6207 or (800) 327-1021, ext. 223

Saturday September 19, 1998
Columbia, SC: Embassy Suites Hotel
8th Annual Cardiology Symposium
SPONSOR: USC School of Medicine – Richland Memorial Hospital CME Organization
DESCRIPTION: Update on issues in cardiology.
TARGET AUDIENCE: Primary care physicians and cardiac ancillary providers
TUITION: $25
CONTACT: Steven Hasterok; (803) 434-4211
CREDITS: Maximum of 8 hours, AMA Category 1

Saturday September 19, 1998
Charleston, SC: Charleston Place Hotel
Pediatric Sickle Cell Conference
SPONSOR: Medical University of South Carolina
DESCRIPTION: Provide update on sickle cell disease to practitioners across the state.
TARGET AUDIENCE: Primary care physicians
FACULTY: Guest and MUSC faculty
TUITION: TBA
CONTACT: Judy Chinnis; (803) 792-3777
CREDITS: TBA

Friday – Saturday September 25-26, 1998
Charleston, SC: Embassy Suites Hotel
Developments in Digestive Diseases
SPONSOR: Medical University of South Carolina
DESCRIPTION: Update in several areas relative to the care and management of gastrointestinal disorders.
TARGET AUDIENCE: Practicing gastroenterologists, general surgeons, and general internists
FACULTY: Guest and MUSC faculty
TUITION: $275 before September 4, 1998; $350 after September 4, 1998
CONTACT: Rita Oden; (803) 792-6865
CREDITS: 7 hours, AMA Category 1

Friday – Sunday September 25-27, 1998
Hilton Head Island, SC: Crowne Plaza Resort
Current Concepts in Psychiatry
SPONSOR: Williams S. Hall Psychiatric Institute – SC Department of Mental Health and Department of Neuro-psychiatry and Behavioral Science, USC School of Medicine
DESCRIPTION: The 24th annual symposium with a program of particular interest to psychiatrists and to other interested physicians.
TARGET AUDIENCE: Psychiatrists, family practitioners, and other interested physicians
FACULTY: Michael Weissburg, MD; Edward Foulks, MD, PhD; John McIntyre, MD; and Jerald Kay, MD
TUITION: $275
CONTACT: Ms. Tsuneko Terry; (803) 434-4266
CREDITS: 8 hours, AMA Category 1

Monday – Friday Sept. 28 – October 2, 1998
Charleston, SC: Charleston Place Hotel
7th Annual Intensive Review of Emergency Medicine
SPONSOR: Medical University of South Carolina
DESCRIPTION: Review and update of major areas of emergency medicine.
TARGET AUDIENCE: Emergency medicine and family physicians
FACULTY: Guest and MUSC faculty
TUITION: $700
CONTACT: Odessa Ussery; (803) 792-4071
CREDITS: 42 hours, AMA Category 1

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The Journal OF THE SOUTH CAROLINA MEDICAL ASSOCIATION

VOLUME 94 JUNE 1998 NUMBER 6

SPECIAL ISSUE: WHAT'S NEW IN CANCER

INTRODUCTION

GUEST EDITOR: J. DAVID OSGUTHORPE, M. D.*

Cancer can present challenges in detection and timely diagnosis, and in selecting among the various treatment options based on the histology, the stage of the disease and the patients' general physical condition and family situation. In South Carolina, the yearly mortality from cancer is approximately 179 per 100,000 of population (second only to that of heart disease), with 17,600 new cases diagnosed in 1997. In a survey of the 50 states and the District of Columbia conducted between 1987 and 1992, South Carolina ranked 22nd in cancer deaths per unit of population, unevenly composed of an 8th ranking in mortality among males and a 33rd ranking among females, in contradistinction to the national trend over the past decade of a 4.3 percent improvement in mortality rates among men but only 1.1 percent among women (majority of difference due to lung cancer increase in females). As with other states, the highest mortalities are from malignancies of the lung and bronchi, the colorectal region, the breasts, and the prostate. Certain neoplasms occur with much greater frequency in South Carolina than the norm in the United States, as follows: 9th for brain and nervous system, 8th for pancreas, 5th for esophagus, 3rd for oral cavity and pharynx and for multiple myeloma, and 2nd for prostate. The aforementioned has been ascribed to various combinations of diet, tobacco and/or alcohol use, environment and race, with the cancer survival rates nationally among African-Americans being 10 to 15 percent lower than those of whites for the most frequent malignancies other than of the lung. A number of federal and/or state funded studies of these disproportionate cancer incidences are currently under way in South Carolina, adding to the long term surveillance of the Savannah River nuclear facility area.

This issue of *The Journal* presents synopses of not only "state of the art" treatments currently available in South Carolina, but also of Hospice and similar facilities. The articles are not meant to be comprehensive but rather to provide the primary care practitioner with an "executive summary" of what is new, and to point towards current references for further reading and/or community and hospital resources within the state.

The issue contains a primer on cancer risk assessment in community practice settings by Karen Brooks of the University of South

---

*Address correspondence to Dr. Osguthorpe at the Department of Otolaryngology and Communicative Sciences, MUSC, 150 Ashley Avenue, Charleston, SC 29425.

Carolina, a description of the newest stereotactic biopsy techniques and subsequent therapies for breast cancers by Jeffrey Giguere, M.D., of Community Clinical Oncology Program in Greenville; an overview of current treatment protocols for prostate cancers by Stephen Milito, M.D., of the Medical University of South Carolina; a synopsis of childhood cancer management by Kevin McRedmond, M.D., of the University of South Carolina; a description of the latest bone marrow transplantation resources and applications by Jean Hensley-Downey, M.D., of the University of South Carolina; an overview of the diagnosis and management of melanomas by Paul Baron, M.D., of the Medical University of South Carolina; an outline of the recent progress in head and neck oncology by David Osguthorpe, M.D., of the Medical University of South Carolina; and finally, a primer of Hospice resources in South Carolina by Marisette Broadney, R.N., of Palmetto Hospice in Columbia.

The authors and I wish to thank Hoechst Marion Roussel for the unrestricted educational grant to the South Carolina Medical Association (SCMA) which made possible both the panel presentation at the Annual Meeting of the SCMA and the excess production costs of this issue of *The Journal.* ❐

CANCER RISK ASSESSMENT IN THE COMMUNITY PRACTICE SETTING

KAREN A. BROOKS, M. S., C. G. C.*

The exponential growth of genetic medicine has been particularly noticeable in the field of oncology where gene-disorder associations are changing the ways in which we think about cancer. As this wave of information is disseminated and often times sensationalized by the news media, patients turn to the primary care practitioner for advice and guidance. The primary care setting is a logical starting point for discussion of hereditary cancer risk. Thus, the basic principles of cancer genetics and the process of cancer genetic counseling are necessary new tools for community practitioners.

FOUNDATIONS OF CANCER GENETICS

Although all cases of cancer involve some genetic changes at the molecular level, approximately five to 10 percent of all cancers are hereditary. Most cases of cancer occur as a result of the accumulation of somatic mutations, also referred to as acquired mutations, while hereditary cases include inherited or germline mutations.

Three types of genes are known to play a role in the development of cancer: oncogenes, tumor suppressor genes, and mutator/DNA repair genes. Each is needed in normal cell division; however, when altered, each can contribute to abnormal cellular growth and differentiation.

When a proto-oncogene acquires somatic mutations, it becomes activated into an **oncogene**. A notable exception to this rule is the **ret** oncogene, which when mutated in the germline, can cause Multiple Endocrine Neoplasia Type II.[1,2]

Tumor suppressor genes can be inherited through the germline and include the much publicized **BRCA1 and BRCA2** genes which, when mutated, can predispose to breast and ovarian cancer as well as the **APC** gene, associated with the rare Familial Adenomatous Polyposis syndrome, and the **Rb** gene, found to be altered in children with retinoblastoma. Note that tumor suppressors can also be acquired somatically.[3]

Mutator/DNA repair genes work in a "housekeeping" capacity. When functioning normally, they prevent mutations from accumulating in proto-oncogenes and tumor suppressors. The most common examples of such cancer genes include the **hHMS1** and the **hMLH2**, both involved in the development of Hereditary Nonpolyposis Colorectal Cancer (HNPCC), formally referred to as the Cancer Family Syndrome or Lynch Syndrome.[4]

CLASSIFICATION OF CANCER IN FAMILIES

The majority (75 to 85 percent) of cancer is **sporadic**. The hallmarks of sporadic cancer include late age of cancer diagnosis, unilateral malignancy, paucity of other affected relatives, or obvious exposure to a carcinogen. The risk of cancer for the relative of an indi-

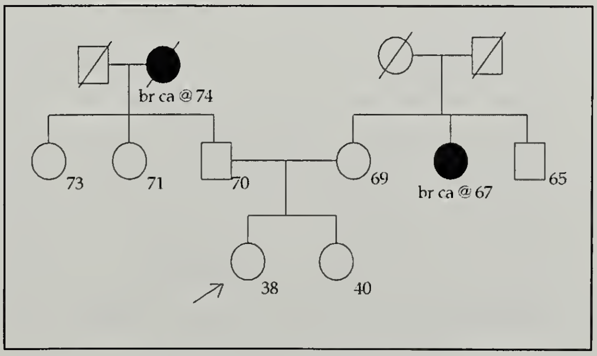

Diagram 1. Sporadic Cancer

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*Address correspondence to Ms. Brooks at USC School of Medicine, Department of Obstetrics and Gynecology, Columbia, SC 29208.

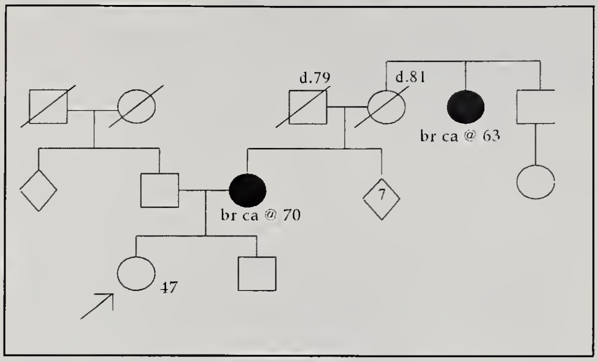

Diagram II. Familial Cancer

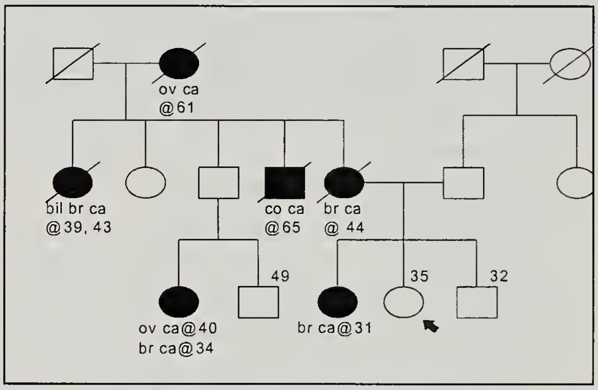

Diagram III. Familial Cancer

vidual with sporadic cancer approximates that of the general population (See Diagram I). Another category of cancer is the **familial** type, the presentation of which includes relatively later age of onset, unilateral lesions and two or three relatives with the same cancer. Familial cancer accounts for 10 to 15 percent of all cancer and is sometimes described as "clustering." The risk to the individual within a familial history of cancer is moderately increased over that of the general population and is thought to be due to the combination of hereditary as well as environmental factors (See Diagram II). Finally, the most dramatic classification of cancer is the **hereditary** group, including five to 10 percent of cancer cases. Its features include early age of onset, bilaterality, multiple primaries, multiple affected family members with the same or related cancers. Hereditary cancer appears to follow an autosomal pattern of inheritance and incurs a significant risk for cancer (See Diagram III).[5]

Indications for Cancer Genetic Counseling

Suspicion of an inherited cancer
Presence of rare cancers in a pedigree
Consideration of various treatment options
Consideration of participation in preventive chemotherapy trials
Patient request for counseling/testing
Determination of cancer risk to relatives
Debilitating anxiety about cancer risk

CANCER GENETIC COUNSELING: THE PROCESS

The process of cancer genetic counseling begins with the construction of a **family pedigree**. The pedigree is a relatively easy to obtain, cost-efficient method of depicting family health history in a graphic form. The cancer-specific pedigree should include information regarding the first-, second- and third-degree relatives. The most important factor to consider is that of the paternal side, even when specifically focusing on breast and/or ovarian cancer. For example, a mutation in the BRCA1 gene can be transmitted from the son of an affected woman to his daughter. Finally, it is important to remember that a pedigree evolves over time and, as such, deserves to be regularly updated. **Confirmation of cancer diagnoses** is crucial when providing a cancer risk assessment. Patients are likely to accurately describe the cancer diagnoses in their first-degree relatives but may not be as familiar with the second- and third-degree relatives. Once the family history has been obtained and confirmed, a **discussion of the genetic and medical facts** surrounding the specific malignancy should be outlined for the patient and his/her family. Also, the history should be evaluated for the **appropriateness of genetic testing**. Before testing is undertaken, the provision of **pre-test education** is imperative. Pre-test education should include a thorough discussion of the benefits, limitations, and potential ramifications of testing. It should also follow that upon completion of pre-test education, informed consent should be achieved. Following testing, the patient should undergo **post-test education** to include the communication of the test results and exploration of the significance of these results in terms of the patient's medical and life goals. The final phase of cancer genetic counseling involves **follow-up and continuing support**. The comprehensive process involved in genetic counseling for cancer usually takes two to three visits, with the initial session lasting up to two hours.[6,7]

CONCLUSION

The primary care physician will play an integral role in this age of genetic medicine and will be challenged to stay current in the fast-evolving field of cancer genetics. Continuing medical education, along with the development of referral partnerships with cancer genetic specialists will allow primary care physicians to better serve the patients and families affected with familial and hereditary cancer.[8,9] ❐

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ADVANCES IN DIAGNOSIS AND THERAPIES FOR BREAST CANCER

JEFFREY K. GIGUERE, M. D., F. A. C. P.*

Breast cancer remains a major public health problem, and yet there is some evidence that mortality figures are decreasing. It is difficult to attribute success in treating this disease to any singular factor.

Innovations in diagnosis and screening have been important in documenting a disease that is less likely systemic at time of discovery. New treatment options are available to include innovative cytotoxic and hormonal agents as well as the sooner than expected prospect of treatment of the disease at its root molecular cause. Genetic markers of breast cancer predisposition are helping to define syndromes of inherited disease. These scientific breakthroughs sometimes occur faster than our ability to determine all of the potential ramifications.

In the last year, new chemotherapeutic agents to include the taxanes (Taxotere, Taxol), and vinolrebine (Navelbine) have become primary agents in the treatment of metastatic breast cancer, especially in those circumstances when the patient has already been exposed to an anthracycline, e.g. Adriamycin. Innovative methods of chemotherapy administration to include weekly dosing and continuous infusion via an outpatient ambulatory pump have circumvented pharmacokinetic and cell kinetic challenges.

Oncologists are increasingly comfortable with dose intensification with the support of growth factors and/or peripheral stem cell transplant. While controversial, high-dose chemotherapy may be the most appropriate option for selected metastatic breast cancer patients as well as those with high risk primaries.[1,2] The appropriateness of the procedure will require not only proof of efficacy, but also proof of its tolerance, both by the patient and the economy.

ADJUVANT THERAPY

One of the most important developments in the history of solid tumor oncology has been the evolution of systemic adjuvant treatment for breast cancer. We have progressed from the total reliance on surgery to cure what was often a systemic disease to the subsequent treatment of axillary lymph node positive disease and the eventual treatment of selective lymph node negative disease.

In 1988, the NSABP (National Surgical Breast and Bowel Project) showed, in a population of lymph node negative, estrogen receptor positive patients, a significant reduction in relapse rates for patients randomized to Tamoxifen vs. no therapy.[3] The follow-up study (NSABP B-20) evaluated whether or not the benefits associated with Tamoxifen might be improved by the addition of chemotherapy. NSABP B-20 randomized lymph node negative, estrogen receptor positive women between tamoxifen alone versus tamoxifen plus one of two chemotherapy options. Tamoxifen was started at the same time as the chemotherapy.

Patients on both arms that included combination chemotherapy had significantly improved disease-free survival and overall survival compared to the group that received tamoxifen alone.[4] The benefit existed for both premenopausal and post-menopausal age groups.

SENTINEL LYMPH NODE BIOPSY: ITS ROLE IN BREAST CANCER

Given the fact that almost all presentations of

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locoregional breast cancer now appear to benefit from the administration of systemic therapy, specifically systemic chemotherapy, one has to subsequently question the role of axillary lymph node dissection in initial management. While defining the degree of lymph node positive disease offers prognostic information, it would represent an advance to determine negative lymph node status without the morbidity of a formal dissection.

Taking the lead of sentinel lymph node mapping from melanoma staging, breast cancer patients are now being evaluated by intraoperative mapping using a combination of a vital blue dye and technetium-labeled sulfur colloid. Albertini[5] successfully identified the SLN in 57 (97 percent) of 62 patients using the two lymphatic mapping procedures. After localization, 18 patients were found to have metastatic disease, and the sentinel lymph node tested positive in all 18 patients. Giulano[6] did intraoperative staging utilizing immunohistochemical techniques and determined similarly accurate predictive value. The procedure allows the pathologist to focus histologically and, potentially in the future, molecularly on one or two nodes to increase the yield of positive dissections and the accuracy of staging.

NEO ADJUVANT CHEMOTHERAPY

While neoadjuvant, or preoperative, chemotherapy has become accepted medical practice for those breast cancers found locally advanced at time of diagnosis, there might well be rationale for administering up-front chemotherapy for patients heretofore treated with surgery first (lumpectomy or mastectomy), then chemotherapy.

NSABP B-18 determined in a randomized study of 1,523 women that, compared to adjuvant chemotherapy, preoperative chemotherapy reduced the size of most breast tumors and decreased the incidence of positive nodes.[7] A 36 percent complete response was noted with an 80 percent total response. No evidence, to date, shows a benefit to neoadjuvant chemotherapy with regard to overall or disease-free survival. It is possible that further study of this issue may produce a paradigm shift in the sequence of delivering multimodality therapy for localized breast cancer.

TAMOXIFEN AND BEYOND

Tamoxifen therapy in breast cancer has evolved from its use in advanced breast cancer in postmenopausal women with positive receptor status to its use as adjuvant therapy in both node positive and now node negative disease. Tamoxifen therapy is associated with prolonged disease-free survival irrespective of age, menopausal status, or nodal status. It has also been associated with positive effects on bone mineral density and risk for cardiovascular disease.

Recently released information from the Breast Cancer Prevention Trial (BCPT) revealed that, relative to placebo control, tamoxifen was associated with a 45 percent

TABLE 1

AIMS OF MODERN ENDOCRINE THERAPY FOR BREAST CANCER

- ♦ INCREASED EFFICACY
  - ◊ Advanced Disease
    - ⇒ Response rate
    - ⇒ Response duration
  - ◊ Adjuvant Therapy
    - ⇒ Cure Rate
    - ⇒ Delay in Relapse
  - ◊ Prevention
    - ⇒Any activity if found
- ♦ DECREASED TOXICITY
  - ◊ General
    - ⇒Gastrointestinal symptoms
    - ⇒Asthenia
  - ◊ Endocrine
    - ⇒Sweats / flashes
    - ⇒Weight gain
- ♦ IMPROVED GENERAL HEALTH
  - ◊ Cardiovascular
    - ⇒Fewer events
  - ◊ Skeleton
    - ⇒Fewer events
  - ◊ Uterus
    - ⇒No proliferation

reduction in breast cancer incidence among high risk participants. Women who are at increased genetic risk for breast cancer whether defined via a family pedigree or new genetic testing now have the option to consider tamoxifen to reduce their chances of developing the disease.

The aims of modern endocrine therapy are shown in Table 1. Some of the strategies include the development of agents that are not cross-resistant with tamoxifen and have a safer toxicity profile. Tamoxifen analogs, as well as pure anti-estrogens, have been developed and are agents that will add to our armamentarium of therapeutic options.

NOVEL ANTIBODY

Under normal conditions, the HER2 proto-oncogene, a gene with cancer causing potential, produces a protein receptor on the cell surface. These receptors are thought to interact with growth factors to control normal cell growth and division. Approximately a fourth of all women with breast cancer overexpress HER2. This is thought to be a marker for more aggressive disease.

A monoclonal antibody to the HER2 protein has been developed and extensively studied both as a single agent and together with chemotherapy. These studies have shown that the antibody produces minimal side effects and is associated with improved time to relapse. Clinical availability of the unique therapeutic modality is scheduled for later this year.

SUMMARY

Major achievements in the field of breast cancer research have occurred in the last year. Improved treatment options with reduced toxicities, better methods of diagnosing disease at a low stage and determining women who are at genetic risk, and the prospect of breast cancer prevention will hopefully translate into further reductions in breast cancer incidence and mortality. ❐

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ADVANCEMENTS IN RADIOTHERAPY AND IMPROVED OUTCOMES IN PROSTATE CANCER*

STEPHEN J. MILITO, M. D.**
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Adenocarcinoma of the prostate is the most common malignancy of men and accounts for nearly 30 percent of all new cancers in men. In the United States, 185,000 men will be diagnosed with prostate cancer. Despite a perception of acting benign, prostate cancer is the second leading cause of cancer mortality in men, surpassed only by lung cancer. In the state of South Carolina, we can expect approximately 3,000 men to be diagnosed with prostate cancer this year and 600 men will likely die from the disease.[1] Although strong feelings pervade the medical community about the value of various treatments, there is little long term data to support any approach over another, and treatment options range from expectant management to combined modality therapy. Understandably, patients may be bewildered by the lack of consensus in the medical community.

NATURAL HISTORY

It is often assumed that men die *with*, not *from*, prostate cancer. Ironically, this belief comes at a time when we have the ability to diagnose prostate cancer at a much earlier stage than before, and the best outcomes may occur with early diagnosis. Previously, prostate cancer was detected in more advanced stages in men of advanced age and commonly at an incurable stage. Now, we detect cancer in men with minimal symptoms years before they are likely to become symptomatic.

We know much about the natural history of the disease from European countries where prostate cancer has not been routinely treated. The largest, long term modern series reported is by Johansson. Sweden has one of the highest incidences of prostate cancer in the world and manages the majority of patients in an expectant fashion. Johansson reported the progression-free, disease specific and overall survival in a group of 223 men from the same region in central Sweden that was managed expectantly. The majority of patients had well or moderately differentiated disease and was over the age of 70. The progression free survival was 55 percent, and the disease specific survival was 85 percent at 10 years. The majority of men died of other causes, but men with symptomatic progression were treated with a hormonal manipulation, which confounds the interpretation of the observation.[2,3] Although these data are often used as an argument against screening, the population described was an unscreened population, and patients that presented at a young age or with significant tumors were not included. Importantly, Sweden has one of the highest death rates from prostate cancer in the world. Should this be the basis of an "observation" model?

RADIATION THERAPY

Management of prostate cancer by radiation therapy has a long history and pre-dates wide scale surgical intervention.[4-6] Unfortunately, the technical limitations of this bygone era limited the usefulness of therapy, and treatment was predominately palliative. Even when treatment was given with curative intent, the doses had to be limited, and there was excessive skin, bowel, bladder, and rectal complications. The development of linear accelerators for medical use allowed higher doses of radiation to be delivered while limiting dose to superficial structures. The ability of megavoltage gamma ray therapy to deliver tumoricidal doses of radiation to the prostate while limiting skin dose allowed higher doses of radiation to be delivered with curative intent. Now, advances in imaging technology allow better visualization of the anatomy and allow radiation oncologists to better define the target structures and avoid the dose limiting normal anatomy. Unprecedented advancement in computer technology has provided the ability to calculate doses in three dimensions in an almost instantaneous fashion and freed the radiation oncologist from the constants of the past.

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RADIATION THERAPY WITH ANDROGEN SUPPRESSION

The role of androgens in the promotion of the growth of prostate cancer has been know since the early 1940s when Huggins and Hodges demonstrated that castration caused tumor regression in men with advanced prostate cancer.[8] The response was so dramatic that some thought that castration might prove to be curative. Unfortunately, in most cases the cancer became androgen independent and progressed. Many radiation oncologists wrongly assumed that androgen suppression would make prostate cancer cells less radiosensitive by placing them in a radio-resistant phase of the cell cycle, and thus would not treat patients with combined therapy. We no longer believe that cycling cells are the only ones that respond to radiation.

Theoretically, local control with radiotherapy can be improved by several mechanisms. One is to increase the radio-responsiveness of the tumor, another is to increase the radiation dose, and a third is to decrease the tumor burden by some other therapy. Therefore, there is the potential that hormonal manipulation can increase local control by reducing the tumor volume. The first reported beneficial effect of hormonal manipulation was reported by Green and Bodner in 1974. They reported that neoadjuvent diethystilbestrol (DES) raised local control rates to 72 percent compared to 55 percent for those treated with radiation alone.[7] Since that time, several additional studies have documented a beneficial effect with combined modality treatment.

The radiation therapy oncology group (RTOG) 8610 randomized patients with locally advanced disease to radiation alone versus total androgen blockade TAB and radiotherapy. The TAB began eight weeks prior to the radiotherapy and continued for 16 weeks total. The combined therapy arm showed an increase in both local control and disease free survival.[8] There was also a suggestion of a decrease in the rate of metastatic failure. However, overall survival was identical in both arms. The RTOG followed this study by investigating XRT plus 16 weeks of TAB versus XRT with two years of androgen ablation. An additional advantage of neo-adjuvant androgen suppression is the potential for decreasing the prostate volume, which can allow smaller radiation field sizes, which may reduce the morbidity of treatment.[9,10] The most compelling evidence that androgen ablation with radiation therapy is superior to radiation alone is the recently published European trial. Patients were randomized to radiotherapy alone verses radiotherapy with goserlin. The patients started goserlin on the first day of radiotherapy and continued androgen suppression for three years. Patients were treated to conventional radiation doses. The trial demonstrated improved local control as well as improved overall survival in the patients in the combined therapy arm.[11]

DOSE ESCALATION

Conformal Therapy: Since Bagshaw, using large field radiotherapy first reported long term control of prostate cancer with radiation therapy, there have been numerous technological innovations that have improved our understanding of the disease and our ability to control it. Early radiation oncologists had to rely on bony anatomic landmarks to localize the gland. Unfortunately, there is considerable variation in the exact location of the gland in relation to the pelvic bones. Therefore, to adequately target the gland, field sizes were generous. The end effect of large field radiotherapy was to limit the dose that could be delivered. Hanks demonstrated in his Patterns of Care study that there was a sharp increase in complication rates when doses exceeded 70 Gy.[12-14] Therefore, until recently, most radiation oncologists limited treatments to this dose. Early results appeared to support these low doses. The discovery of prostate specific antigen (PSA) and the availability of its assay changed our understanding of prostate cancer treatments. Radiation oncologists began to question whether the doses of radiation were adequate to eradicate localized prostate cancer after Hanks demonstrated improved local control with higher doses of radiation in patients with clinical stage III disease.[15]

The availability of PSA as a tumor marker led to the realization that although many men had stable rectal examinations, they had progressive disease documented by a rising PSA. Other investigators have looked at the rates of positive biopsies after definitive radiotherapy and have found rates that range from 30 to 80 percent. There are numerous reasons why the rates vary so widely, but the evidence suggests that positive biopsies are predictive of subsequent distant metastatic disease.[16-18] Therefore, in many cases conventional doses of radiation were not enough to gain local control.

In the 1980s, technological innovations, a better understanding of the biology of prostate cancer, and PSA as a tumor marker provided the impetus for radiation oncologists to begin to gingerly escalate the dose of radiation to the prostate. A series of studies conducted by the RTOG helped unravel the concept that prophylactic irradiation of lymphatics provided therapeutic advantage.[19-20] Therefore, clinicians found reasons to decrease the irradiated treatment volume, particularly of normal tissues with the intent of lowering the side effects of treatments. The wide spread availability of computed tomography (CT) allowed better localization of the prostate. Simultaneous development in computer technology allowed for sophisticated graphics based planning techniques to be applied to radiation therapy. Radiation oncologists could now more accurately target the prostate and avoid dose-limiting structures such as bladder and rectum. This use of CT images to target a lesion, the ability to avoid normal structures, the use of three-dimensional delivery, and dose volume calculations has been labeled three-dimensional, conformal radiation therapy (3D-CRT).

The advantages of 3D-CRT are better tumor localization, decrease dose to adjacent structures, and the ability to improve the dose distribution through the target volume. Better tumor localization alone can likely increase the probability of local control. Several investigators have documented that using conventional bony landmarks often underestimate the prostate volume, and thus lead to inadequate treatment plans. A retrospective review of patients treated at the Fox Chase Cancer Center demonstrates that patients treated with conformal therapy have a better response to treatment compared to a matched cohort of patients treated with conventional radiotherapy despite no differences in the radiation dose.[21] Additionally, there is now evidence that patients treated with conformal techniques to conventional doses have a lower complication rate than conventionally treated patients.[22]

The ability to escalate the target dose and thus improve control rates without increasing complication rates is the main goal of 3D-CRT. Several institutions have implemented dose escalation trials for prostate cancer and have reported preliminary results of their data that indicate that substantially higher doses of radiation can be delivered with conformal techniques without raising complication rates. Liebel reports that doses as high as 81 Gy can be safely given without an increase in complications.[23] Meticulous attention to radiation technique is necessary to escalate doses to this level. There is evidence that merely using 3D-CRT localization techniques but treating with conventional fields do not allow dose escalation to these levels, and that the rates of severe complications skyrocket when doses are escalated beyond 75 Gy.[24] The addition of a lateral block to decrease rectal dose sharply improved the complication rate, but at the potential risk of under treating a portion of the gland.[25] Others have also reported that limiting the amount of rectum receiving the full dose of radiation lowers rectal complications.[26] Yet, there is now evidence that these higher doses of radiation lead to improved local control and freedom from PSA failure.[27,28]

Brachytherapy: Prostate brachytherapy has emerged as the comeback kid of the 90s. Essentially, brachytherapy offers the same potential as 3D-CRT of greatly increasing the radiation dose, while limiting dose to the rectum to below tolerance level. Interesting, brachytherapy was the first radiation method utilized to treat prostate cancer and the earliest report of dates back to 1910 when Paschkis reported his experience using radium needles for prostate implants.[4] Since that time, radioactive radium, gold, iodine, iridium, and palladium have all been utilized. As late as the early 1980s, these were open procedures requiring general anesthesia and a lengthy hospital stay.

This open procedure was pioneered in the early 1970s when Whitemore and Hillaris devised a retropubic brachytherapy procedure. The seeds were deposited in a freehand fashion during a laparotomy. Early results were optimistic, but it became evident that local failure rates were high.[29] Analysis of the implants revealed that freedom from local failure was related to the dose that was delivered to the prostate and to the coverage of the implant. Patients with poor coverage had a 60 percent rate of local failure at 10 years. The most interesting and compelling aspect of this report was the evidence that local failure led to distant spread of disease.[30]

More recent interest stemmed from Holm's development of a minimally invasive procedure that was done under ultrasound guidance and utilized a transperineal template for needle deposition of the radioactive "seeds."[31] Additionally, palladium, an isotope similar to iodine but with a higher activity and suitable for permanent implants, became commercially available. Since that time, several institutions have documented high rates disease control and minimal rates of significant complications.[32] Despite the optimistic results, using transperineal approach does not guarantee good results, and the procedure requires a considerable level of skill and selection of appropriate patients. Vijverberg reported a series of 52 patients treated with ^{125}I implants and followed with repeat biopsies.[33] There is a significant correlation between implant quality and a negative biopsy. Patients with a 10 to 25 percent underdosage were at a 2.3 fold risk of recurrence, and patients with greater than 25 percent underdosage were at a 6.7 fold risk of recurring. Additionally, he documented that implant quality improved with experience.

The MUSC Experience: The Medical University of South Carolina implemented a three-dimensional conformal radiotherapy program in January of 1995 and a transperineal, ultrasound guided prostate brachytherapy program the following year. Since that time, we have treated 42 men with curative intent with 3D-CRT. The average age is 71, and the median follow-up in 18 months. All men received greater than 72 gray, and 20 of 42 men received 75 gray or more. All men were able to complete the prescribed course of therapy. The most common acute side effects were dysuria, nocturia, and increased frequency. Twenty men required either cardura or pyridium to help with their symptoms.

Seven of 42 men complained of mild tenesmus and one patient had diarrhea that resolved when eulexin was discontinued. Only 36 men are available for long term followup. Three of the 36 men had transient episodes of guiaic positive stools, and two of the 36 men had intermittent episodes of minor rectal bleeding. There are no reported cases of incontinence and no cases of rectal bleeding requiring transfusion or surgical intervention.

CONCLUSIONS

Adenocarcinoma of the prostate is a common malignancy whose treatment remains controversial. There is now sufficient evidence to conclude that conventional radiotherapy will fail to cure a significant number of men with prostate cancer, and more aggressive strategies need to be taken. Fortunately, there has been rapid advancement in technological aspects of radiation delivery and improvements in our understanding in the biology of the disease. Although the evidence is still preliminary, we can conclude that higher doses of radiation can sterilize the local disease. In addition, judicious use of androgen suppression may not only contribute to local control, but could possibly increase survival in a subset of patients with locally advanced prostate cancer. Although safe dose escalation is feasible and there are numerous methods to deliver the higher doses, physician skill remains paramount to the effective implementation of this goal. ❐

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PROGRESS AND PROMISE IN PEDIATRIC ONCOLOGY

KEVIN P. MCREDMOND, M. D.*

The success story that is pediatric oncology is perhaps the best kept secret in modern medicine. It is every pediatric oncologist's experience that both the lay population and many within the medical profession are unaware that the majority of children with cancer will be cured of their disease. One need only consider the advances in care of patients with such diseases such as Wilm's tumor, Hodgkin's disease, and non-Hodgkin's lymphoma to gain an understanding of the incredible scientific advances that have been achieved in the past three decades. In no disease, though, has this been more evident than in the treatment of children with acute lymphoblastic leukemia (ALL). In the 1960s, ALL claimed the lives of virtually all affected patients. In 1998, we expect cure rates of 75 to 80 percent. More importantly, we expect continued improvement in survival statistics as newer, more innovative therapies are developed. Despite these success stories, much work remains to be done, particularly concerning two diverse diseases, acute myelogenous leukemia (AML) and brain tumors. Significant advances in cure rates for these diseases have eluded us for some time. The reasons are varied and beyond the scope of this abstract. However, because of relatively recent developments in the treatment of these malignancies, we remain enthusiastic and encouraged.

THERAPY FOR AML

Patients with AML comprise 15 to 20 percent of childhood leukemias, which translates into approximately 500 new cases per year. Various chemotherapeutic protocols using combinations of agents, namely cytosine arabinoside and anthracyclines, have all resulted in cure rates of approximately 35 percent. The first significant breakthrough in recent years came about through the use of allogeneic bone marrow transplant. Utilizing this therapy for patients in first remission resulted in cure rates of 50 percent. Studies done to directly compare this therapy with more "standard" therapies such as autologous bone marrow transplant and standard chemotherapy were initiated by the Pediatric Oncology Group in 1988 and by the Children's Cancer Group in 1989. These data clearly show that allogeneic bone marrow transplant is the treatment of choice for patients with AML, resulting in cure rates of 55 to 60 percent. The premise, therefore, is intensification of therapy. This is a "luxury" provided by (in part) our improved ability to manage side effects, treat infectious complications, and provide safer and more available transplantation services. The "promise" for the future is in improved remission rates, expansion of availability of bone marrow transplant to patients without an identical match, and decreased death rates secondary to toxicity of therapy.

CENTRAL NERVOUS SYSTEM TUMORS

For the majority of tumors involving the central nervous system, surgery and radiation therapy remain the mainstay of therapy. Significant advances in the delivery of care of those therapeutic modalities have contributed greatly to improvement in survival rates in recent years. The dilemma that faces the pediatric oncology team is that these malignancies occur in nervous systems that are undergoing continued growth and development. The chal-

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lenge is twofold: minimize acute and chronic CNS morbidity and cure more children. The question of utilizing chemotherapy has been debated for years. The reasons to not utilize chemotherapy include the relative slow growth rate of CNS tumors, low mitotic index, and the blood-brain barrier. The answers to many of these questions are slowly coming to light as a result of clinical trials involving comparisons of standard therapies versus chemotherapy based therapies. For some CNS tumors, namely medulloblastoma/PNET, high grade astrocytomas, the benefit of adjunct chemotherapy is clear. Presently, patients with completely resected (note again the critical role of the neurosurgeon) medulloblastoma who received chemotherapy can expect cure rates of 70 to 80 percent. Note also that these children require and receive craniospinal radiotherapy as a crucial part of this therapy. Utilizing chemotherapy, though, has allowed us to decrease the total cranial dose maintaining excellent cure rates and diminishing long-term side effects of radiotherapy Unfortunately, not all CNS tumors respond as well. Gliomas involving the brain stem are notoriously unresponsive to chemotherapy and radiation therapy. Brain stem and thalamic gliomas are not typically resectable. These areas are examples of challenges for the future. The answers will almost certainly rely on continued basic science research, improved neurosurgical techniques, innovative radiotherapy delivery systems, and novel chemotherapeutic agents. Most importantly, therapy with CNS malignancies continue to be treated on clinical trials as developments continue at Children's Cancer Group and the Pediatric Oncology Group. ❐

SCMA NEWSLETTER

A PUBLICATION OF THE SOUTH CAROLINA MEDICAL ASSOCIATION

Audria Belton Benn, Editor
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June 1998

HIGHLIGHTS OF THE MAY 28 BOARD OF TRUSTEES MEETING

PEP and HOP: Ms. Mary Barnett with the Department of Health and Human Services presented a progress report to the board on the Physician Enhanced Program (PEP) and Healthy Options Program (HOP).

SOCPAC Nominations: The board approved the nomination of *Patrick B. Mullen, MD*, of Greenville to fill the vacancy of Patricia Westmoreland, MD, of the 4th District.

End of Life Robert Wood Johnson Grant: The board approved SCMA's involement to work with other agencies to secure a grant from the Robert Wood Johnson Foundation to educate physicians about end of life issues. The board also approved SCMA Medical Ethics Committee efforts to create an ethics network to develop standards for other ethics committees. ❐

MEDICARE UPDATE

Millennium Changes to HCFA-1500 Filing Instructions: As of October 1, 1998, you will be required to enter eight-digit birth dates on Form HCFA-1500 for Medicare Part B claims. This includes entering two-digit months (MM) and days (DD), and four-digit years (CCYY). The reporting requirement for eight-digit birth dates will not require a revision to the HCFA-1500 claim form. However, the instructions and printing specifications for the HCFA-1500 claim form were changed so eight-digit birth dates can be reported.

HCFA-1500 Fields Affected by New Reporting Requirement:

- Item 3—Patient's Birth Date
- Item 9b—Other Insured's Date of Birth
- Item 11a—Insured's Date of Birth

Please note that eight-digit birth dates must be reported with a space between month, day, and year (i.e., MM_DD_CCYY). On the HCFA-1500 claim form, the space between month, day, and year is delineated by a dotted, vertical line. To illustrate, if the patient's birthdate is January 21, 1935, then you would enter the following in item 3 of Form HCFA-1500:

3. Patient's Birth Date—(MM) 01 (DD) 21 (YY) 1935

If you do not submit eight-digit birth dates as of October 1, 1998, your claim will be returned to you as unprocessable.

HCFA-1500 Fields Not Affected by New Reporting Requirement:

- Item 11b—Employer's Name or School Name
- Item 12—Patient or Authorized Person's Signature Date
- Item 14—Date of Current Illness, Injury, or Pregnancy
- Item 16—Dates Patient Unable to Work in Current Occupation
- Item 18—Hospitalization Dates Related to Current Illness
- Item 19—Reserved for Local Use
- Item 24a—Date(s) of Service
- Item 31—Signature of Physician/Supplier

(Continued on page 4)

CAPSULES

E. Carwile LeRoy, MD, of Charleston has received the American College of Physicians (ACP) conferred mastership, its highest level of membership. ACP is the nation's largest medical specialty organization. According to ACP bylaws, masters are elected "for their personal character, positions of honor or influence, contributions toward furthering the puposes of the College, and/or eminence in practice or in medical research."

William H. Hester, MD, of Florence has been honored by the South Carolina Rural Health Association for his outstanding achievements in health care and for over 30 years of service to South Carolinians by receiving the 1998 Pioneer Award of Merit.

George B. Nicholson, MD, of Myrtle Beach has received a three-year appointment as Cancer Liaison Physician for the Hospital Cancer Program at Columbia Grand Strand Regional Medical Center. The Cancer Liaison Program is an integral part of the Commission on Cancer of the American College of Surgeons. Dr. Nicholson is among a national network of over 2,000 volunteer Cancer Liaison Physicians who provide leadership and support to the Approvals Program and other Commission on Cancer activities.

Daniel W. Brake, MD, of Charleston has been reappointed by the Board of Trustees of the American Medical Asscociation (AMA) to the Council on Legislation.

PCN UPDATE

Physicians Care Network (PCN) now has 5,983 participating physicians and 628 participating ancillary providers. With the addition of Kershaw County Medical Center, effective April 15, 1998, and Aiken Regional Medical Center, effective May 15, 1998, PCN now has 82 participating hospitals. PCN currently has 72 contracted groups and 18 groups pending for contracts with approximately 56,000 covered lives. As contracts are received, we will provide more information. **Remember, early notification of address changes will ensure that there are no claims payment delays.**

Fidelity Group, Inc. (International Workers Association) terminated 6/15/98.

NEW GROUPS

- Gateway Supply Company, Columbia; effective 4/1/98; Access/Utilization Review.
- General Foods, Bamberg; effective 1/1/98; Access/Peer Review.
- Guess Farm Equipment, St. Matthews; effective 4/1/98; Access/Utilization Review.
- Builders Supply, Inc., Lancaster; effective 4/1/98; Access/Utilization Review.
- Kimlor Mills, Orangeburg; effective 4/1/98; Access/Utilization Review.
- Fogles, Inc., Neeses, SC; effective 4/1/98; Access/Utilization Review
- Carolina Filter; Sumter; effective 4/1/98; Access/Utilization Review.
- City of Forest Acres, Forest Acres; effective 4/1/98; Access/Utilization Review.
- Sea Island Comprehensive, Johns Island; effective 3/1/98; Access/Peer Review.
- The Provident ARAZ, Statewide; effective 1/1/98; Access/Peer Review.
- Tomlinson Sales Company, Florence; effective 4/1/98; Access/Utilization Review.

If you have questions about PCN, please contact Cindy Osborn, Network Coordinator, at (803) 798-6207, extension 257 or statewide at (800) 327-1021. You can also send an e-mail message to cindy@scmanet.org. ❐

FREE PUBLICATION ABOUT GENETICS OF ALZHEIMER'S DISEASE

The *Alzheimer's Disease Genetics Fact Sheet* from the National Institute of Aging's Alzheimer's Disease Education and Referral (ADEAR) Center summarizes new knowledge about the genetics of Alzheimer's Disease. Topics include: genes, chromosones, familial and sporadic AD, apolipoprotein E (apoE) testing, confidentiality of genetic test results, public policy regarding apoE testing, and current questions for researchers to explore.

For a free copy of this fact sheet (publication number Z129), call the ADEAR Center at (800) 438-4380 or access the fact sheet on the Internet at at the center's website at http://www.alzheimers.org/adear. ❐

SCMA WORKSHOP

EFFECTIVE NURSING SUPPORT

JULY 16, 1998

Every day the health care environment becomes more turbulent and managed care places new demands on physicians. These demands require physicians to become more focused on their practice management methods and responsibilities. Nursing and clinical support staff, like medical practice business managers, face many new challenges and additional responsibilities. This workshop is designed to provide the nursing and clinical support staff with some innovative and creative ways to become more effective in contributing to improved service excellence and more efficient patient flow management. Physicians, clinical staff, and medical practice managers will realize a reduction in the day-to-day concerns and chaos which often occur once the patient has entered the clinical support area. **Register by July 6, 1998.**

9:00 a.m. - 4:00 p.m.; Registration: 8:30 a.m.
Columbia, Adam's Mark Hotel

Space in each program is limited, so be sure to register early. If you have any questions, please contact Melissa Hamby, extension 253, at 798-6207 in Columbia, or at (800) 327-1021 statewide, or by e-mail at melissa@scmanet.org.

MEDICAID UPDATE

Clinical Laboratory Improvement Amendments (CLIA) Requirements: Beginning July 1, 1998, the Department of Health and Human Services (DHHS) will deny payments to all providers billing lab procedures that do not meet CLIA certification criteria. To prevent claim rejections, it is important that DHHS records indicate the correct certification type for each provider. If you have any questions regarding this matter, please contact your Medicaid program manager at (803) 253-6134.

Medicaid Billing Reminder: It is important that your Medicaid provider number be correctly entered on claims in order to ensure accurate reporting of your Medicaid payments to the Internal Revenue Service (IRS) and to ensure proper claims editing. Payments are based on your submission of claims, therefore, DHHS will not reissue 1099s. Individual physicians who are members of a group should be billing under the group provider number. This number should appear in field 33 of the HCFA-1500 claim form. If you have any questions regarding this matter, please contact your Medicaid program manager at (803) 253-6134.

Physician Enhanced Program (PEP): Fourteen practices are participating in this program, serving 5,843 Medicaid recipients. Please contact your program manager at (803) 253-6134 if you have any questions regarding this program.

Healthy Options Program (HOP): This program allows enhanced reimbursement for office visits to physicians providing Medicaid children with a medical home. HOP continues to grow with 244 physicians in 29 counties. Over 15,000 children have been served under HOP. Please contact your program manager at (803) 253-6134 if you have any questions regarding this program.

Early and Periodic Screening and Diagnostic Testing (EPSDT): The South Carolina Medical Association (SCMA) and DHHS have teamed up to study EPSDT requirements. If you have any concerns about the program or suggestions for improvement, please contact Ms. Alicia Jacobs, DHHS, Physician Services, at (803) 253-6134 or Kelly Danias, SCMA, at (803) 798-6207, extension 236 or statewide at 1-800-327-1021. ❐

MEDICARE UPDATE (continued)

NOTE: Item 15 is not required for Medicare Part B services.

You may enter either a six or eight-digit date for these fields (items 11b, 12, 14, 16, 18, 19, 24a, or 31) as of October 1, 1998. If you choose to enter eight-digit dates for these fields, please note the following:

- Form HCFA-1500 does not have to be revised to capture eight-digit dates for the above fields.
- All date fields, except for item 24a, must be reported with a space between month, day, and year (i.e., MM_DD_CCYY). On Form HCFA-1500, the space between month, day, and year is delineated by a dotted, vertical line.
- Item 24a must be reported as one continuous number (i.e., MMDDCCYY), without any spaces between month, day, and year. By entering a continuous number, the date(s) in item 24a will penetrate the dotted, vertical lines used to separate month, day, and year. Medicare's claims processing system will be able to process your claim if you penetrate these vertical lines. However, all eight-digit dates reported must stay within the confines of item 24a.
- Do not compress or change the font of the "year" field in item 24a to keep the date within the confines of item 24a. If you enter a continuous number in item 24a with no spaces between month, day, and year, you will not need to compress the "year" field to remain within the confines of item 24a.
- The "from" date in item 24a must not run into the "to" date field, and the "to" date must not run into item 24b.
- Dates reported in item 24a must not be reported with a slash between month, day, and year.
- If you decide to enter eight-digit dates for items 11b, 12, 14, 16, 18, 19, 24a, or 31, you must enter eight-digit dates for all these fields. For instance, you are not permitted to enter eight-digit dates for items 11b, 12, 14, 16, 18, 19, 31 and a six-digit date for item 24a. The same applies to those who wish to submit six-digit dates for these fields.

If you do not adhere to the above requirements, your claim will be returned to you as unprocessable as of October 1, 1998. ❒

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AMA PROGRAM ACCREDITS FIRST PHYSICIAN

Randolph D. Smoak, Jr., MD, of Orangeburg was awarded a certificate of accreditation during an awards ceremony last month, becoming the first physician to successfully undergo an American Medical Accreditation Program^{SM} (AMAP^{SM}) review of his qualifications using standards for training, behavior, practice, and patient care. The AMAP program was developed by the AMA.

Dr. Smoak, who also serves as chair of the AMAP Governing Body, sought to lead other physicians by example. "As chair of the body that set the standards for this new national benchmark of physician quality, I feel obligated to demonstrate my commitment to the importance of this new process by assuring my own practice meets the same quality measures that I helped create for others," Dr. Smoak said.

AMAP is available to physicians in New Jersey, the District of Columbia, Idaho, and Montana. The AMA plans to offer the program in six additional states by the end of the year.

LATEST TRENDS AND APPLICATIONS OF STEM CELL TRANSPLANTATION

JEAN HENSLEE-DOWNEY, M. D.*

Stem cell transplantation (SCT) using cells obtained from the patient (autologous) or from a healthy donor (allogeneic) for treatment of patients with otherwise fatal marrow disorders, hematologic malignancy, and cancer has continued to increase dramatically for over a decade.[1-3] Based on the number of cases reported to the International Bone Marrow Transplant or the Autologous Blood and Marrow Transplant Registries (IBMTR and ABMTR) between 1980 and 1996, there is an approximately eight-fold increase in allogeneic (allo), and a 15-fold increase in autologous (auto) transplantation. Estimates based on a report rate of approximately 40 percent for allo cases performed worldwide and of 50 percent for auto cases performed in North America, would indicate that over 17,000 allo and 30,000 auto transplants were performed worldwide in 1996. As medical indications and donor availability increase, an exponential growth in utilization continues.

EVOLVING PRACTICE TRENDS

Interesting trends in the practice of SCT can be gleaned from IBMTR and ABMTR data. The source from which stem cells are obtained has moved from the marrow compartment to the blood, particularly when performing autologous transplants. While there has been enthusiasm in using peripheral blood for allogeneic transplant, this approach is currently tempered by the emergence of significant late complications. Cells from the umbilical cord at time of birth have become a new source for allogeneic SCT. These changes in harvesting the graft have led to confusion in the terminology chosen to describe transplantation. The term stem cell was initially coined as a reference to auto transplant but is now considered more all-inclusive, referring to any form of transplant involving the infusion of hematopoietic progenitor cells.[4-6]

The choice between allo and auto SCT is often based on the diagnosis of the patient. Almost all patients with breast, ovarian, or testicular cancer, and most with other solid tumors, lymphoma and multiple myeloma have been given their own cells in support of high-dose anti-neoplastic therapy. The use of a healthy donor is clearly required for patients with non-malignant hematologic or genetic disorders and often preferred for patients with acute or chronic leukemia. Thus, allo-SCT is utilized both to restore defective cell lines, as well as rescue marrow function following intensified marrow-ablative anti-leukemic therapy. Referral for allogeneic marrow transplant has gradually increased over time, mostly due to the development of alternative donors for patients without a matched sibling.

Current advances in the ability to use alternative donors, both related and unrelated, eliminate donor availability as a barrier to allo-SCT.[7-14] All alternative donors involve some genetic histocompatibility differences between the donor and recipient and should never be considered "matched" even when the term is used in an ascribed eponym. Thus, there is a higher risk for immunologic complications, including graft failure, graft-vs-host disease (GvHD), and life-threatening infections. A search of adult volunteer or cord blood registry resources reveals that there is wide variability in the availability of an unrelated donor who shares similar major-HLA antigens with the patient. Availability is based on the population frequency of a given HLA-haplotype, and is severely limited for individuals with uncommon types, which are frequently associated with racial and ethnic diversity. On the other hand, family members who are genetically MHC-half-identical (haploidentical) offer the immediate availability of a donor for almost every patient.[9] Results published from the University of South Carolina demonstrate that the ability to overcome HLA-barriers and achieve engraftment rates and control of GvHD is similar to that achieved using matched sibling donors.[14] Currently, published results do not indicate a clear preference among alternative donors. Therefore, the donor most available may be the best choice since a delay in transplant is a major factor associated with poor outcomes.[6]

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In conventional allo-SCT, an evaluation of 100-day mortality is often an indication of procedure-related toxicity. As shown by IBMTR analysis, outcome is directly correlated with the timing of the transplant as based on the patient's disease status at time of transplant.[15] Mortality following matched sibling donor transplant may range from 10 percent in transplants performed early in first remission, to over 40 percent in those with advanced leukemia. Although 100-day mortality is lower following auto-SCT, it may still exceed 15 percent in patients with advanced disease. Over time, a decrease in mortality, ascribed to improvements in preventing and/or treating post-transplant complications, has had limited influence in improving disease-free survival, due to the continued practice of referring patients to transplant late in their disease course, when failure from cumulative toxicity and relapse is most likely.

Mobilization strategies for auto-SCT harvesting and the administration of growth factors post-transplant has markedly reduced the period of severe neutropenia and minimized the need for in-patient hospitalization. Thus, the cost of auto-SCT has been reduced, and many patients are now cared for in an outpatient setting that is often available close to home. This is more difficult to accomplish following allo-SCT where complications related to immunologic dysfunction often demand a highly protected environment and intensive therapeutic support. Efforts to reduce cost must be monitored carefully to ensure that both short-term and long-term outcomes and ultimate cost are not adversely effected.

Efforts to decrease regimen-related toxicity have employed methods to alter cytotoxic therapy, hasten engraftment, protect major organ function, and prevent infection.[4-6] The use of tumor-specific or radiolabeled antibody products, bone-localizing isotopes, and immunomodulatory techniques, which are associated with a decrease in the incidence and severity of organ toxicity, may allow dose-reduction of chemotherapy and total body irradiation. The favorable influence on engraftment produced by the administration of hematopoietic growth factors has contributed to a reduction in transfusion therapy, which has been made safer through more sophisticated methods of screening and filtration. Treatment aimed at the reduction or blockade of cytokines and/or stabilization of tissue injury appears to curtail non-marrow toxicity.

Infection remains a major concern following SCT, although fatality, often due to opportunistic organisms, is usually restricted to allo recipients in whom even long-term prophylaxis, extending to one year or longer, is required.[4-6] Invasive and usually fatal cytomegalovirus infections occur less often following prophylactic or prompt institution of Ganciclovir therapy. Invasive fungal infection continues to be an overwhelming infection, although successful salvage therapy may be feasible using high-dose therapy with less-toxic Amphotericin-lipid complex drugs combined with aggressive resection procedures. The development of T-cell immunotherapy is an emerging approach that has proven highly effective against some viral infections and may have secondary benefit through enhancement of immune reconstitution.

Prevention and control of acute GvHD remains essential to successful outcome, particularly when using alternative donors for allo-SCT.[16] While our understanding of the pathophysiology of GvHD has grown, our therapeutic options remain limited, in part due to the extreme expense involved in developing new treatments for a relatively small patient population. Sequential immunotherapy, targeted to both the graft and the post-transplant chimeric recipient, has been effective in prevention and durable control of GvHD when using alternative allo donors. Recent reports from the University of South Carolina suggest that less toxic therapy using photopheresis may be helpful in reversing progressive chronic GvHD, which may tragically alter the quality of achieving disease-free survival.

On the contrary, the donor-mediated immunologic response may produce an important graft-vs.-leukemia (GVL) effect that can improve cure rates.[4-6,15] Separating this potentially beneficial cellular reaction from the unwanted generalized tissue destruction seen in GvHD is extremely difficult. Definition and manipulation of lymphocyte subsets that specifically mediate GVL activity has remained elusive. Nonetheless, clinical studies have proved that donor leukocyte infusions (DLI) can reverse relapse following transplant. Current attempts are underway to improve the safety of DLI therapy through insertion of a "suicide gene" that, once activated, would arrest GvHD activity. Ongoing work will explore methods to develop leukemia-specific responses, which might include manipulation of co-stimulatory molecules, control of the function and activity of antigen processing cells, and proliferation of T-cell clones specifically sensitized to recipient leukemia or highly-expressed leukemic antigens.

OUTCOMES FOLLOWING STEM CELL TRANSPLANTATION

Disease-free survival following auto SCT for leukemia is disappointing mostly due to the high probability of relapse.[15] Patients with acute lymphoblastic leukemia have experienced a > 50 percent relapse rate resulting in three-year DFS of < 40 percent, both of which worsen with advancing disease. Results in acute myelogenous leukemia are similar (RR > 45 percent and DFS < 50 percent). Results are much more encouraging in patients with lymphoma and some solid tumors. While disease status continues to be the primary factor effecting outcome, three-year DFS can climb to > 85 percent in Hodgkin lymphoma in first remission, which is reduced to < 50 percent in patients never in remission. Again, similar results are found in low-grade Non-Hodgkin lymphoma (DFS range > 80 percent to < 30 percent), intermediate grade or immunoblastic Non-Hodgkin lymphoma (DFS range > 65 percent to < 40 percent), and breast cancer (DFS range > 70 percent to <15 percent).

Best results in allo-SCT might be expected for patients with severe aplastic anemia since failure is mostly related to medical complications rather than disease recurrence.[15] In patients with HLA-identical sibling donors reported to the IBMTR, age continues to influence probability of three-year survival, which reaches 73 percent in patients less than 20 years, and falls to 61 percent in older recipients. Survival was adversely effected, at a projected level of about 40 percent, in patients with aplastic anemia who received an unrelated donor SCT. For patients with hematologic malignancy, a marked increase in relapse associated with advancing disease contributes to diminishing three-year DFS seen in chronic myelogenous leukemia (RR range, 16 to 61 percent; DFS range, 66 to 19 percent), acute lymphoblastic leukemia (RR range, 25 to 68 percent; DFS range, 54 to 20 percent), and acute myelogenous leukemia (RR range, 24 to 57 percent; DFS range, 59 to 26 percent). Although, outcomes have generally been inferior when using an alternative donor, there have been impressive advances as Centers develop new techniques and gain experience. Of interest, a recent IBMTR analysis showed a trend towards improved three-year survival for alternative donor recipients compared to matched recipients who were transplanted with advanced disease. This appeared to be correlated with greater donor HLA-disparity and suggests a potentially more potent GVL effect.[17]

CONCLUSION

Over the past two decades, many barriers both to access and to success following SCT have been overcome. Significant challenges still remain. These range from cost control to ultimate disease eradication. The current commitment to research that spans the continuum from innovative single-Center research through to international collaborative studies provides great hope that SCT will conquer incurable disease. ❐

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CURRENT TRENDS IN THE MANAGEMENT OF MELANOMA*

PAUL L. BARON, M. D.**

There has been a marked increase in the incidence of melanoma among Caucasian populations around the world. Although the increase has often been in the thin melanomas with an excellent prognosis, there has still been a rise in the mortality rate from this disease. The number of deaths from melanoma in the United States increased from 2.9 per 100,000 in 1965 to 4.5 per 100,000 in 1985.[1] Melanoma is now one of the most common cancers in the United States.

It is important to understand the concept of microstaging of melanoma. The prognosis of a patient with melanoma can be predicted by the thickness of the tumor. In the past, the level of dermal invasion—the Clark's level—was found to correlate with a patient's five-year survival.[2] Subsequent studies have showed that Breslow's microstaging is more reliable in predicting long term survival. In this method, an optical micrometer is used to measure the depth of invasion of a melanoma in millimeters.[3] As a result, there is less variation than the Clark's approach of trying to determine which level of dermis is invaded. This leads to more consistency between pathologists rendering a final report on a biopsy specimen that turns out to be melanoma. The other value of Breslow's approach is that it is not affected by the fact that skin thickness varies from one portion of the body to another. Thus, two different melanomas which may have the same Clark's level, can have different thicknesses based on where they are located. A Clark's III on the skin of the eyelid will be thinner, and thus more favorable than the same Clark's III on the skin of the back or sole of foot.

If a decision is made to biopsy a lesion of the skin to rule out melanoma, it is important to obtain a full thickness portion of skin which includes subcutaneous fat at the deep surface.[4] This is the only way that one can be certain that the depth of invasion is accurate. Thus, for lesions less than 2cm in width, either an excisional biopsy or punch biopsy is preferred. If the lesion is too large to excise completely (usually over 2cm), then an incisional biopsy is recommended. It is important in this latter instance to incorporate the thickest part of the pigmented lesion in addition to a portion of adjacent normal skin. This can be performed with either an ellipse or a punch biopsy. Ideally, one should not perform a shave biopsy on a pigmented lesion in order to obtain a diagnosis of melanoma. If melanoma extends to the deep surface of the shave biopsy since a full thickness biopsy was not performed, then it is possible that there is melanoma left behind in the biopsy bed. As a result, one can not be certain of the true depth of invasion of the melanoma. This is a critical piece of information since it dictates the extent of reexcision. Despite this, a shave biopsy will still show the minimal depth of invasion in addition to rendering a diagnosis.

In 1907, William Sampson Handley described the results of an autopsy on a patient with advanced melanoma.[5] He noted that "permeation of the lymphatics is the principal agent in this local centrifugal spread" of melanoma. As a result of this single case, he concluded that melanoma be removed by wide local excision with a one inch (2.5 cm) margin of normal skin in addition to one inch of subcutaneous tissue (5cm total). This recommendation became the stan-

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TABLE 1. RECOMMENDED MARGIN OF EXCISION BASED ON THICKNESS OF PRIMARY MELANOMA

Melanoma Thickness	Margin of Excision (cm)
In situ	0.5 to 1
Less than 1 mm	1
1 to 4 mm	2
Greater than 4 mm	2 to 3

dard of practice by most surgeons treating melanoma in the 20th century. Fortunately, this has changed over the past two decades as data showing less extensive procedures can result in comparable local control and long-term survival.

A number of randomized prospective studies have clarified the surgical approach to the local treatment of patients with melanoma. (Table 1) These have shown that one can tailor the margin of excision to the depth of invasion of the tumor. Veronesi showed that for thin melanomas less than 1mm thick, a 1cm margin of excision has the same long term survival and local control as a 3cm margin.[6] Balch randomized patients with an intermediate thickness melanoma (between 1 and 4mm thick) to a 2cm or 4cm margin of excision.[7] This latter study concluded that a 2cm margin of excision was adequate since the long term survival and local control rates were comparable to those who underwent the wider excision. These narrower margin patients also required fewer skin grafts and a shorter hospital stay. To date, it is not clear what the optimal excision margin is for patients with thick melanomas (over 4mm thick). These patients have the poorest prognosis. Thus, it is reasonable to perform a two or 3cm excision margin in these patients. In any of these cases, the surgical defect should ideally be closed primarily. If this is not feasible, then the alternatives range from a skin graft to any sort of local rotation flap. The latter will tend to have a better cosmetic result than a split thickness skin graft.

In addition to controlling the local disease, the other goal of managing a patient with melanoma is to determine whether there has been any evidence of distant spread of the tumor. In the past, there was a great deal of controversy as to whether one should perform an elective lymph node dissection (ELND) or a therapeutic lymph node dissection (TLND). In an ELND, the lymph node basin most likely to contain microscopic evidence of metastatic melanoma is removed in the hope of removing the disease when it is early and most curable. In a TLND, the lymph nodes are removed when they are enlarged due to metastatic melanoma. On the one hand, a number of retrospective studies showed a survival benefit for patients undergoing ELND.[8-9] On the other hand, a number of prospective randomized studies have failed to show any survival benefit to ELND when compared to observation alone.[10-12]

Despite the negative studies regarding the benefit of ELND, it makes sense that if one could identify which patients are likely to have microscopically positive lymph nodes and remove them, there may indeed be some benefit. Part of the reason for the lack of benefit in the randomized studies is that most patients had negative lymph nodes dissected out. Recently, the greatest interest has been on the technique of lymphatic mapping and sentinel node biopsy. Initial studies showed that lymphatic channels in the dermis drain to a specific lymph node in a nodal basin (so called sentinel node). Morton described a procedure in which isosulfan blue dye is injected into the dermis around the skin at a melanoma site.[13] He then made an incision over the lymph node basin likely to harbor the sentinel lymph node, dissected down until he located the lymphatic channel with blue dye, traced it back to the blue node and removed it. All of these patients also underwent a complete lymph node dissection. Morton showed that if this lymph node was free of melanoma, then all of the other lymph nodes were negative for melanoma 95 percent of the time. Thus, the standard approach would be to remove the sentinel node first. If this shows melanoma (20 percent of the time), then the patient should be returned to the operating room for a complete dissection. If there is no melanoma in the node (80 percent), then no further surgery on the lymph nodes is needed.

The lymphatic mapping and sentinel node biopsy technique was modified by Krag and others.[14] In this method, technetium sulfur colloid was injected circumferentially into the dermis around the primary melanoma site. This was done either with or without the isosulfan blue dye. Planar gamma camera images were subsequently obtained to verify which nodal basin the isotope drained to. An incision was then made over the lymph node basin at risk, and a handheld gamma detector was used to guide dissection to the radiolabeled lymph node. This technique enabled surgeons to successfully resect the radiolabeled sentinel lymph nodes in 118 (98 percent) of 121 patients.

At this point, it appears that the lymphatic mapping/sentinel node technique has value in identifying the subgroup of patients who may benefit from lymph node removal. This may partly explain the retrospective data in which some patients appear to benefit from lymph node dissection. If a patient has a positive sentinel lymph node, then that patient should be returned to the operating room for a formal lymph node dissection of the basin with the positive node. Long term studies examining whether lymphatic mapping and sentinel node biopsy impact upon survival are still needed. It certainly appears to be a less morbid procedure than routine lymph node dissection.

The other major advance for patients with melanoma has occurred in the area of chemotherapy. Kirkwood studied patients whose primary melanomas were over 4mm thick or had metastatic disease to lymph nodes.[15] The patients treated with high-dose interferon alpha 2a (INTRON A) had an improved disease-free and overall survival when compared to untreated controls. Patients with metastatic melanoma have been treated with a number of different regimens. McClay has showed that combination chemotherapy that includes tamoxifen and cisplatin had an objective response rate of 51 percent.[16] There is an extensive melanoma clinical research program at MUSC as a result of this latter data. Tamoxifen and cisplatin are used for both patients with metastatic disease and those who have undergone surgical resection of all melanoma. There are also a number of vaccine trials for patients with advanced disease.

In summary, careful attention to melanoma microstaging will guide how to optimally manage patients with melanoma. Lymphatic mapping and sentinel node biopsy appears to be the ideal method for identifying patients who may benefit from a lymph node dissection. There has been advances in systemic therapy for patients with both resected and metastatic melanoma. ❐

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J. DAVID OSGUTHORPE, M. D.**
MARCELO HOCHMAN, M. D.
PETER WEBER, M. D.
B. DAVIS, D. M. D.

Tumors of the upper aerodigestive tract and adjacent skull base are more prevalent in South Carolina than most other sections of the United States. Cancer deaths per 100,000 of population within the 50 states and the District of Columbia between 1987 and 1992 place South Carolina twelfth in mortality from malignancies of the larynx, ninth from the brain and nervous system, fifth from the esophagus, and third from the oral cavity and pharynx.[1] The disproportionate frequency of tobacco use in South Carolina probably accounts for the majority of the increased incidence in the upper aerodigestive area, but other identified factors include occupational exposures in the textile and woodworking industries, dietary factors such as alcohol (especially moonshine) or barbequed/smoked foods plus a generally high fat and low fruits/vegetables intake, gastroesophageal reflux, and possibly, heredity. Cure rates utilizing standard modality surgery have changed little in the past decade except for tumors about the skull base, for which advances in surgical techniques and irradiation delivery have improved prognoses considerably. For the more common cancer sites, such as the larynx and pharynx, progress has been confined to the preservation of form and function in an increasing percentage of patients and, hence, in their subsequent quality of life. For instance, earlier stage laryngeal cancers are seldom now subjected to open surgery such as laryngectomy, but rather are addressed by endoscopic laser ablation (on a same day or overnight hospital stay basis) or by external beam irradiation, commonly in a twice daily delivery format (termed hyperfractionation) to minimize patient time off from work.[2,3] For advanced laryngeal and adjacent pharyngeal cancers, national multimodality "organ preservation" protocols are currently in phase III trials. Following promising data a few years ago from a Veterans' Hospital system study of chemotherapy and irradiation, a protocol (RTOG 91-11) to clarify the results is available in Charleston and Greenville for stage III and IV glottic and supraglottic carcinomas, and entails randomization of patients to treatment arms of induction chemotherapy (cisplatin and 5-fluorouracil) followed by irradiation or concomitant chemoirradiation or irradiation alone.[4] It is hoped that a greater percentage of patients with T3, though most do not think likely for T4, carcinomas may be able to maintain laryngeal function without diminishment in cure rates. The downside to any attempt to stretch the limits of chemoradiation is that surgical salvage of treatment failures can be challenging and necessitates, at least, wide field laryngectomy and an increased incidence of wound healing problems; close involvement of a broadly competent surgical team (gastric transposition and/or free flap expertise, etc.) is prudent.

Chemoprevention trials, most commonly with a vitamin A analog such as 13-cis retinoic acid, are available at a number of cancer centers in South Carolina and have demonstrated promise in diminishing the incidence of second primary tumors of the upper aerodigestive tract. The aforementioned is particularly important to the long term survival of head and neck cancer patients as the most common cause of death in a patient who has had one head and neck primary is the second primary, and hence the reason for life long post-treatment physician followup.

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The skull base is an exceedingly complex anatomic region through which pass all cranial nerves and the blood supply to the brain. Access is compromised anteriorly by the facial skeletal framework and laterally by the mandible and mastoid. It was not until the 1980s that more than a few multidisciplinary teams of neurosurgeons and otolaryngologists entered this region to access sinus and nasal tumors involving the upper nasal vault, the sphenoid, the nasopharynx, the infratemporal fossa, and the middle or inner ear for malignancies, or benign processes such as paragangliomas, schwannomas, meningiomas, aneurysms, and the like.[5] With advances in surgical instrumentation and techniques plus the sophisticated anatomic delineation afforded by specialized head coil magnetic resonance imaging and microembolization techniques to control tumor vascularity, aggressive approaches to tumors in this region now afford the patient a reasonable risk/benefit ratio. Indeed, stereotactic (or image-guided) navigation using external skull markers and computers to render "real time" three-dimentional images affords surgeons orientation to within 1-2mm of certainty over the entire skull base. For tumors not amenable to resection, or those in which postoperative irradiation is deemed prudent, three-dimensional planning of the external beam ports affords reasonably safe delivery of higher doses to the tumor without as much morbidity to adjacent structures which have poor radiation tolerance, such as the cranial nerves and brain. Stereotactic radiosurgery, commonly applied to areas of intracranial and cranial base tumor involvements of 3cm or less, has become more widely available in both Charleston and Columbia. Intrinsic to a cranial base team of otolaryngologists and neurosurgeons is the reconstructive expertise of a prosthodontist and a facial plastic surgeon. Rehabilitation is no longer limited to regional flaps and simple glue-on external prostheses or dentures, but vascularized free flaps which can be of variable thickness, including muscle and/or bone, to close dural and/or skull base defects and can be made sensate by the inclusion of peripheral nerves. The promulgation of osseointegrated implant expertise from Scandinavia to the United States over the past few years has allowed rigid fixation of post-surgical obturators, even affording full oral diet capability in those with a total palatectomy defect.[6] Patients with skin tumors that have necessitated resection of an ear or a nose no longer have to rely on glue to maintain a prosthesis in place during social and/or athletic events, as the aforementioned can now be rigidly anchored to the adjacent skeleton.

In summary, advances in tumor management in the head and neck region over the past decade have centered on the preservation or restoration of form and function without compromising cure and on the skull base region. ❐

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HOSPICE RESOURCES IN SOUTH CAROLINA

MARISETTE BROADNEY, R. N., B. S. N.*

WHAT IS HOSPICE?

The word hospice is derived from the Latin word "hospis" which means a place of shelter and rest for weary travelers on a long journey. Today, the word hospice does not denote a place, but a philosophy of care. The first hospice was started in 1967 by Dame Cicely Saunders in London, England. Hospice development in the United States occurred in 1974 with the inception of the first hospice in New Haven, Connecticut. The hospice philosophy incorporates care designed to decrease the pain and suffering and improve the quality of life for the patients and their caregivers who are living with a life threatening illness.

HOSPICE IN SOUTH CAROLINA

Hospice in South Carolina is flourishing. According to Hospice for the Carolinas, a two-state trade association comprised of North and South Carolina hospices, there are 34 hospice programs in the state. These hospice programs provide hospice care in all 46 counties. There are various types of hospice programs, but most of the hospice care delivered in the state is provided in the home setting. In addition to home hospice services, hospice is available in nursing home and inpatient settings. According to the South Carolina Department of Health and Human Services Medicaid Hospice Client Summary Report, hospice programs in South Carolina provided care to 3,962 patients from July 1, 1996 through June 30, 1997. In addition, 74 percent of the patients served had a cancer diagnosis. The average length of stay is also approximately 54 days.

WHAT SERVICES ARE PROVIDED BY HOSPICE IN THE HOME SETTING?

The hospice home care model includes visits from the following team members: nurses, medical social workers, certified nursing assistants, therapists, chaplains, and volunteers. The medical care in the home setting is directed by the primary physician. An interdisciplinary team care plan is developed for each patient which outlines the specific care each patient and caregiver should receive. The hospice interdisciplinary team cares for the whole person and addresses the physical, emotional, psychosocial, and spiritual needs of the patient and caregiver.

BENEFITS RECEIVED BY HOSPICE PATIENTS WHEN UTILIZING THE MEDICARE HOSPICE BENEFIT

The Medicare Hospice Benefit was established by the federal government in 1983. It was designed to assist terminally ill elderly patients manage the symptoms of the terminal illness in the home setting. When a patient elects Medicare Hospice Benefit, Medicare

HOSPICE ADMISSION CRITERIA

- Physician certifies that the patient is terminal with a life expectancy of six months or less.
- Family and friends are willing to care for the patient at home.
- Patient is aware of the terminal prognosis and understands that hospice offers palliation not cure.
- Patient's attending physician agrees to work with hospice in providing care.
- Patients with non cancer diagnosis meet the criteria outlined in the Local Medical Review Policies (LMRPs).

---

*Address correspondence to Ms. Broadney at Palmetto Health Alliance, Community Services Department, 3 Medical Park, Suite 200, Columbia, SC 29203.

KEY COMPONENTS OF HOSPICE CARE VERSUS HOME HEALTH CARE

HOME HEALTH	HOSPICE
Patient is home bound	Home bound status not required
Skilled need must be documented	Skilled need not required
RN available 24 hours	RN available 24 hours (Night time visits are common)
Discipline assigned based on patient's plan of care	Interdisciplinary approach
	Bereavement care for 13 months after the patient's death
	Assistance accessing community resources for medications, medical equipment, utilities, and supplies
Task focus	Holistic focus
Fee for service	Per diem reimbursement
	100 percent coverage of all reasonable and necessary medical and support services for the management of the terminal illness. These services include: medications, home medical equipment, medical supplies, short term hospitalization, and short term inpatient respite.
20 percent co-payment	Only co-payment $5/prescription

reimburses the hospice at a different per diem rate for each level of care. There are four levels of care: home care, general inpatient, inpatient respite, and continuous care. The majority of patients receive hospice home care services. This is considered routine home care. Medicare reimburses the hospice approximately $92 a day. Hospice is responsible for the professional management of the patient's terminal illness. In return, hospice provides the visits by the various interdisciplinary team members, medications, equipment, and medical supplies needed to manage the patient's terminal illness. The financial incentives encourage cost effective care. Care moves from the hospital to the home setting.

WHEN IS THE RIGHT TIME FOR HOSPICE?

Although hospice is an excellent alternative for terminally ill patients and their caregivers, hospice may not be the right choice for each patient. Successfully transitioning a patient to and from curative therapy to the hospice philosophy requires openness of communication between the physician and the patient regarding the patient's prognosis. The second critical factor in successfully transitioning the patient to hospice is making the referral at the appropriate time. Answers to the following questions may be used as a guide to determining when is the right time for hospice:

- Is there evidence of physical decline or exacerbation of symptoms such as pain, fatigue, anorexia, etc.?
- Is the patient's quality of life still satisfactory to the patient?
- Is the patient ready to stop curative therapy?
- Are caregivers available when the patient can no longer live alone?
- Has the patient made decisions about a

Living Will and code status?

Patients must be prepared emotionally for hospice services, as well as physically displaying signs of disease progression. Most caregivers are appreciative of receiving hospice services when prepared for the change from curative therapy to symptom management designed to improve the patient's quality of life. Hospice must be presented as a viable option, designed to offer the dying patient comfort and death with dignity. Hospice does not take away hope but assures that no patient or caregiver ever faces living with a terminal illness without support and care from individuals skilled in the art of caring for the dying. ❐

On the Cover:

CANCER

Hippocrates (460-370 B.C.) compared the long, distended veins radiating from lumps in the breast to crabs—*karkinoma* in Greek, *cancer* in Latin. Ancient Egyptian papyri refer to the disease, and sarcomas have been found in mummies.[1] From 500 B.C. to 500 A.D., cancer was recognized, named, and its prognosis defined. Treatment by excision or cautery was used for superficial lesions, with caution against such treatment for more advanced disease. Galen (131-201 A.D.) theorized that an excess of black bile, one of the four humors of the body, was the cause.

From 500 A.D. to 1500 A.D. Galen's humoral theory of causation prevailed. The knife and cautery continued to be used for accessible cancers and caustic and soothing ointments for ulcerated, more extensive lesions. Cancer of the skin and mouth and of the female breast were mentioned in surgical treatises. Cancer of the stomach, rectum, and womb were recognized but untreatable.[2]

In the 16th century, Andreas Vesalius' (1514 -1564) understanding of anatomy corrected many of Galen's errors and this new knowledge coupled with William Harvey's (1578-1657) discovery of the blood circulation and Jan Swammerdam (1637-1680) and Ruysch's discoveries in lymphatics (1664 and 1665) provided the basis needed for understanding and treatment. Also important were advances in surgery by Ambroise Pare (1510-1590) who popularized Vesalius' work.

In the 18th century, John Hunter (1728-1793) made surgery into a science. The diagnosis and treatment of cancer improved as a result. In 1755, Percivall Pott (1714-1788) described scrotal cancer among chimney sweeps, the first occupational cancer with an environmental cause.

Developments came rapidly in the 19th century. In 1837, Johannes Muller (1801-1858) looked at cancers through a microscope and thereby introduced a new dimension to pathological anatomy. Also instrumental in the progression was Schleiden and Schwannn who introduced the cell theory (1838-39) and Robert Remak (1815-1865) who improved on the cell theory by pointing out that the proliferation of cells to form tissues is accomplished by cell division (1852). Also influential were Wilhelm His (1831-1904) in Switzerland, and German anatomist, Wilhelm Waldeyer (1837-1921). The introduction of anesthesia in 1846 and of antisepsis in 1867 allowed Theodor Billroth (1829-1894) and other surgeons to develop operative procedures for internal cancers. Billroth performed the first successful resection of the pylorus for cancer.[3]

The 20th century marked the emergence of oncology as a scientific discipline and opened the period of experimental cancer research. Radiotherapy was added to surgery as an effective treatment for some cancers by 1930, and chemotherapy came into use by 1960.[4] In spite of all this progress, in 1985 the many forms of cancer...caused the death of an estimated 462,000 people in the United States, one every 68 seconds.[5]

Pictured on the cover this month is the title page from the doctoral dissertation of Robert Campbell Starr, class of 1850, from the Medical College of the State of South Carolina. This is the only thesis on cancer in the collection of 1800 theses of graduates from 1825-1860.

Jane McCutchen Brown, Curator
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Alliance Page

SCMAA-SCIMER SCHOLARSHIP AWARDS

On April 26, 1998, the South Carolina Medical Association Alliance (SCMAA) and South Carolina Institute for Medical Education and Research (SCIMER) Scholarship Committee had the pleasure of presenting 14 $2,000 scholarships to students from the University of South Carolina School of Medicine (USCSM) and Medical University of South Carolina (MUSC) College of Medicine.

The recipients are chosen by an interview process conducted by the Scholarship Committee in Columbia and Charleston, and are determined by need, academics, extracurricular involvement, and interpersonal skills. This was a difficult task as all students interviewed were outstanding and deserving.

USCSM students receiving scholarships were:

Mary Beth Poston
Andrew John Dyksterhouse
Paula R. Hayes
Ariel Alejandro Pertile
Rachel O'Neill Pertile
Daniel Bascom Ward
David Chadwick Weston

MUSC students receiving scholarships were:

Matthew Everett Bryan
Emily Ann Ellis
Randall Nix Goodroe
Odette Margit Houghton
April Michelle Odom
Edgar Lowndes Ready
Nelly Frances Welsch

Other scholarships given were:

Annie & Charles H. Fair Scholarship ($1,000)
Bronwen Elizabeth Sanderson from USCSM
Conway Hospital Medical Staff Scholarship ($2,500)
Jennifer Lynn Harper from MUSC
Cardiology Consultants of Spartanburg Scholarship ($1,000)
Jennifer Jayne Adams from MUSC
Dr. Swift Black and Dr. Susanne Black Scholarship ($1,000)
John Tompkins Ramey from MUSC
SCIMER Academic Essay Scholarship ($2,000)
Mary Beth Poston from USCSM

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Mrs. John T. Caskey (Alice)
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Gray Matter

"Matters of Interest to South Carolina Physicians."

Thornton & Thorne give the medical community something to think about this month.

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In a viatical settlement, the owner of a life insurance policy sells the policy to a third party, the viatical company. The sale occurs during the lifetime of the insured. The objective is to raise cash for the seller (the viator).

In most cases, the seller is also the insured but not always. In most cases, the insured has a serious illness but, again, not always. In all cases, the goal is to realize cash during the insured's lifetime from an asset that normally doesn't pay until the insured's death.

Viatical settlements began a decade or so ago, primarily among insureds with AIDS. They have evolved to where their use today is widespread among insureds that suffer any serious illness. Their growth was fueled by the Health Insurance Portability and Accountability Act of 1996 that made the proceeds free of federal income tax for insureds with terminal or chronic illnesses.

A terminally ill insured is one who has been certified by a physician to have an illness likely to result in death within 24 months. A chronically ill insured is one who is permanently or severely disabled. If the seller does not meet either of these definitions, federal income tax will be due on the gain from the viatical settlement.

The amount that will be paid by the viatical company depends upon a number of factors and varies on a case by case basis. The industry is slowly being regulated but its important to deal with well-capitalized companies that have been carefully checked and researched.

If the insured has the ability to maintain the policies until death by continuing to pay the premium, this is certainly the best option. However, if the insured has a need for cash and cannot pay the future premiums, a viatical settlement may offer real benefit. It's an option that should at least be explored to see if it offers advantages.

If you, or any of your patients, would like further information on viatical settlements, we'll be happy to provide it.

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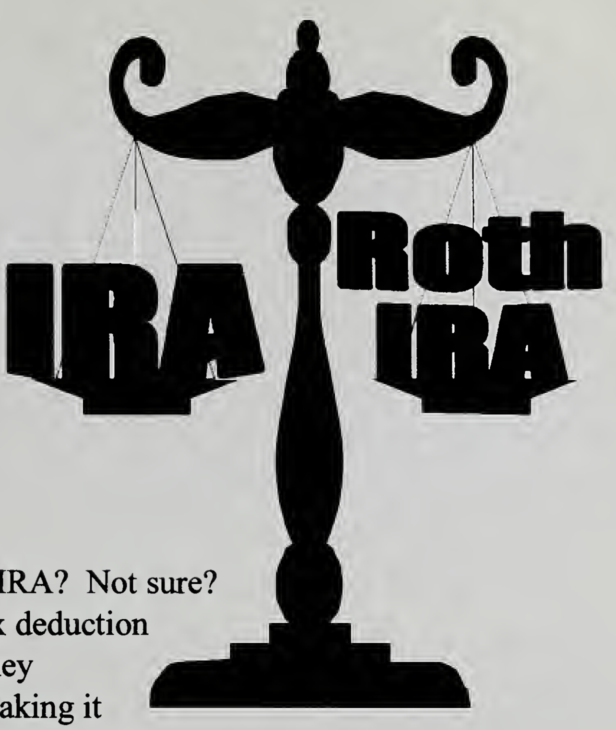

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NEUROSYPHILIS MIMICKING HERPES SIMPLEX ENCEPHALITIS
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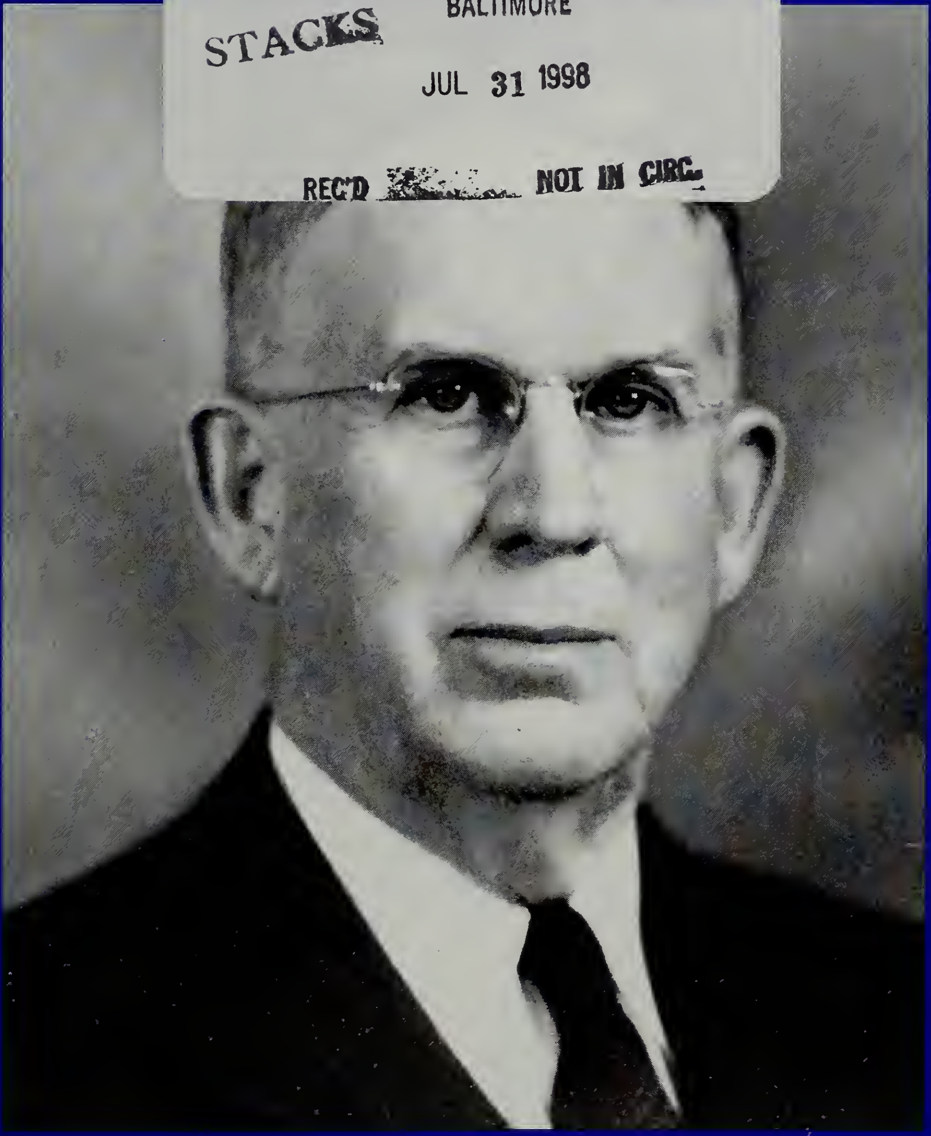

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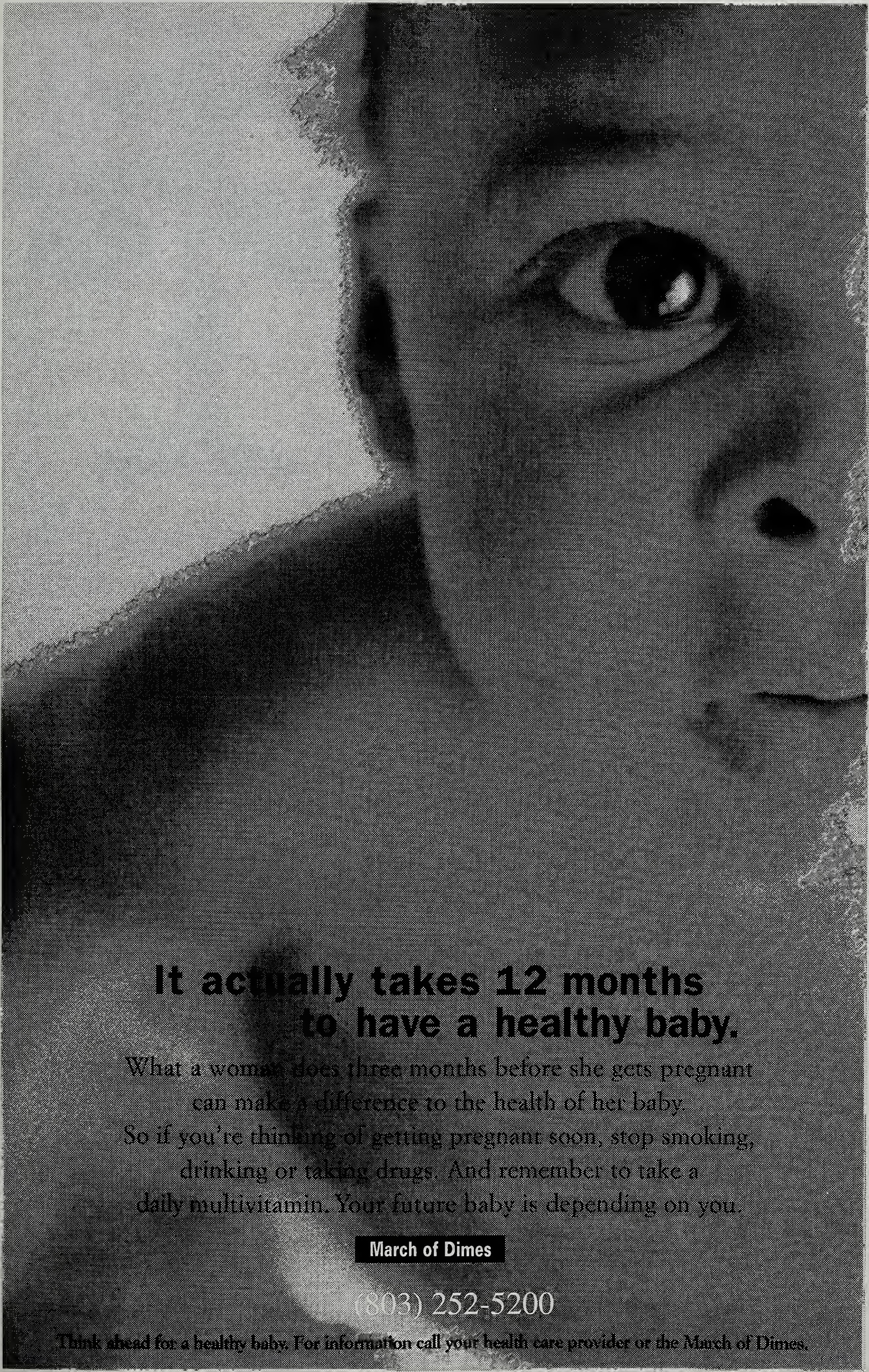

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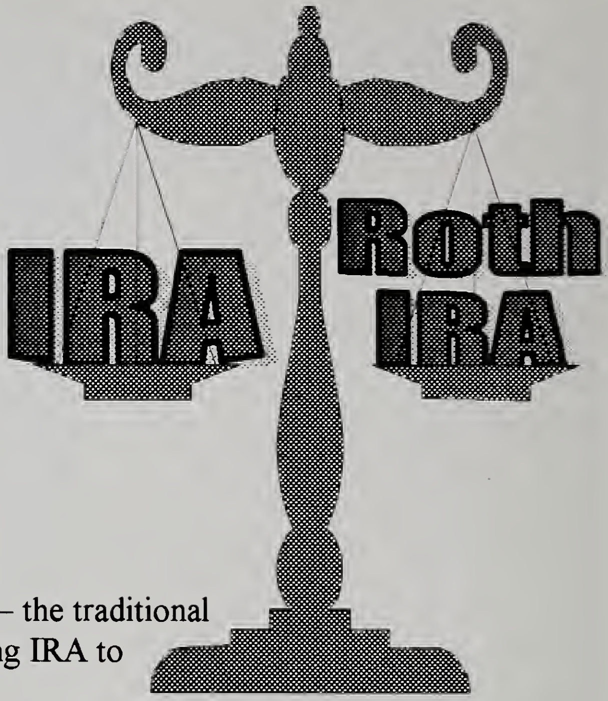

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President's Page

THE FEDERATION OF MEDICINE

Since its beginning, the American Medical Association (AMA) has always tried to represent all United States physicians. In days past when physicians were required to belong to the AMA and attest to its code of ethics, basically all United States physicians DID belong to the AMA. The AMA was organized on the basis of state delegations, and they called this collection of states and the county medical societies they represented The Federation.

Since World War II, several forces have changed the face of organized medicine. The rise of specialty societies, the uncoupling of AMA membership and licensure (now medical licensure is controlled by the individual states), and a general decline in "joining" have all led to a decline in AMA membership per se. So now the term Federation refers to all the parts of organized medicine, including county medical societies, state medical societies, specialty medical societies, and other specialist interest groups (such as military medicine, medical students and residents, African American physician groups, women's medical groups, and others). Over the years, the AMA has acted to include many of these groups in its House of Delegates, which meets every six months.

As AMA membership falls and specialty society membership rises, we all face the issue of who speaks for "medicine," and this is not a trivial issue. This issue is much more important than which organization is predominate. There are political and educational issues that touch us all and are important. These issues need some unified/organized response or action. To address this concern, the AMA has commissioned a study group, the Study of the Federation.

The Federation Study Team is looking at how to provide collective representation but also ways to minimize dues, improve communications, and otherwise tie and bind all these important medical groups together. Important reports from the The Federation Study Team are forthcoming over the next 18 months, and the South Carolina Medical Association (SCMA) will keep you posted.

In South Carolina, we too are studying how to best represent all medical groups. We have formed the Interspecialty Council for Legislative Activities in which all specialty groups send one to three representatives to committee meetings to discuss legislative and other issues of mutual concern, even issues that are potentially divisive. Follow through is voluntary, but I hope decisions can be voluntarily binding on the parties. We hope that all our lobbyists can cooperate and support the council's decisions once these decisions are ratified by the SCMA Board of Trustees.

Give us your feedback and thoughts.

Stephen A. Imbeau, M. D.
President

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BASIC PRINCIPLES OF CANCER GENETICS*

S. ROBERT YOUNG, PH. D.**
KAREN A. BROOKS, M. S.
JANICE G. EDWARDS, M. S.
S. TERRELL SMITH, M. D.

Clinical genetics is one of the fastest growing fields of medicine. In recent years, individual genes have been mapped, cloned, and studied in nucleotide by nucleotide detail. Currently, one of the most exciting areas of medical genetics centers on the study of cancer. Through the techniques of molecular biology, we have the opportunity for greater understanding of the oncogenic process. This article will describe the current knowledge of the basic principles in cancer genetics.

CANCER GENES

Three types of genes are known to have a role in the development of cancer: proto-oncogenes, tumor suppressor genes, and mutator genes. Each are needed in normal cell division. However, when altered, they can contribute to abnormal cellular growth and differentiation.

Proto-oncogenes are cellular growth regulating genes. As "normal" proto-oncogenes, they function as growth factors, growth factor receptors, nuclear proteins, or membrane proteins.[1] A mutational event causes transformation from a proto-oncogene state to an "activated" abnormal state referred to as an oncogene. This activation causes deregulation of normal activity and initiates overstimulation of cell growth. Several dozen oncogenes have been discovered in human tumors or in cultured cell lines. Examples include ras, abl, myc, src, ret, and erbB-2 (HER2/neu). The name of an oncogene is often related to the type of tumor that has been associated with it.[2] For example, the oncogene src has been associated with sarcoma, fes with feline sarcoma, and sis with simian sarcoma. Typically, oncogene activation mutations are acquired in somatic cell division and are not inherited.

An exception to this pattern of a normal proto-oncogene being activated to an oncogenic state is the ret oncogene, which can be inherited and is responsible for multiple endocrine neoplasia type 2 (MEN2).[3] An example of a somatic cell undergoing oncogene activation occurs when a chromosome translocation takes place creating the Philadelphia chromosome associated with chronic myelogeneous leukemia.[4] The proto-oncogene abl normally located on chromosome 9 becomes an activated oncogene when it is translocated to the breakage cluster region (bcr) on chromosome 22. The resultant bcr/abl fusion gene product functions in the transformation of the myeloid cell line. Because this mutation is acquired in mature somatic cells, there is no hereditary risk to the offspring.

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Tumor suppressor genes inhibit cell proliferation and tumor development.[5] While oncogenes are sometimes characterized as equivalent to the automobile accelerator, tumor suppressor genes are the brake system. When tumor suppressors are inactivated by mutation or deletion, they lose their ability to stop tumor progression. In general, a single normal tumor suppressor gene in a cell is enough to maintain normal cell regulation. Inactivated tumor suppressor genes can be inherited through the germline or acquired somatically. In some cases, a person will inherit one inactive tumor suppressor gene present in all cells and lose the allelic normal gene by deletion. Alternatively, a person can inherit both normal genes and be misfortunate enough to have both genes lost or mutated somatically. In both cases, a malignancy is likely to occur in the mutated, unregulated cell line. Examples of tumor suppressor genes are the Rb gene associated with retinoblastoma, the BRCA1 and BRCA2 genes associated with breast cancer and the APC gene, which predisposes to familial adenomatous polyposis.

The genes involved in DNA repair are called mutator genes or mismatch repair genes.[6] During the S phase of the cell cycle, DNA is replicated prior to the next cell division. Many mistakes occur during this enormously complex process. Fortunately, a very efficient "spell checking system" is in place, searching for mismatch events and correcting any replicative errors that may have occurred. In theory, a malfunctioning repair system allows mutational events to accumulate and increases the risks of malignancy. As with tumor suppressors, a single normal gene is enough to protect the cell. A common situation involves an individual who inherits a mutated gene, which is then present in all of the person's somatic cells. During a subsequent cell division, the remaining normal gene is deleted. Without a normal repair gene functioning, subsequent daughter cells would accumulate more and more mutations until a malignant condition ultimately resulted. Mismatch repair genes (MSH2, MLH1, PMS1 and PMS2) are commonly associated with hereditary nonpolyposis colon cancer (HNPCC), which accounts for up to eight percent of all colon cancer.[7]

MODELS OF THE NEOPLASTIC PROCESS

There are two popular models of tumor formation: Knudson's Two Hit Model[8,9] and Vogelstein's Multiple Hit Model of Colon Cancer.[10,11] It is likely that both models will be useful in understanding the development of various cancers. Most commonly, Knudson's Model has been applied to the childhood cancer retinoblastoma. His model suggests that two events are needed to inactivate a particular tumor suppressor gene-pair. Both events can occur somatically during the person's lifetime or the person can inherit one mutant gene and acquire the second mutation (hit) somatically. This model supports many of the known clinical findings associated with retinoblastoma. For instance, the inherited form of the disease is often present at an earlier age, is more often bilateral, and often affects other family members. It is reasonable to expect that if one defect is present from the time of birth and is present in all of the somatic cells that a second mutation would occur earlier and more likely occur in a second organ.

Vogelstein's Model suggests that a malignancy is the result of an accumulation of mutations which first acts to transform a normal cell to an adenomatous one, then to a more undifferentiated adenomatous cell, and on to a cancerous cell which can infiltrate and finally metastasize. While these steps may form a cascade, they do not necessarily have to occur in sequence. This could account for why some tumors seemingly progress more rapidly than others. Considerable evidence suggests Vogelstein's theoretical sequence of events leading to aggressive malignancy occur in certain types of colon cancer.

The mechanisms behind cancer genes are not yet fully understood. An important theoretical consideration is that some genes might be active only in certain tissues while other genes might be more general and perhaps influenced by other genes, hormones or other environmental factors to activate only in certain tissues or groups of tissues. Cancer genes may act as predisposing only specific tissues (site specific) or in whole groups of tissues (cancer family syndromes). Cancer syndromes, on the other hand, refer to situations where a predisposing gene affects several different tissue types. Individuals who inherit this type of gene are more susceptible to a specific set of cancers (breast and ovarian or colon, endometrium and ovarian, for example). The tumor suppressor P53 may function in an even greater number of tissues.

SOME EXAMPLES OF HEREDITARY CANCERS

In 1990, susceptibility to a form of early-onset breast cancer was linked to DNA markers located at chromosomal position 17q21.[12] These familial cases shared certain epidemiological characteristics such as younger age at diagnosis, frequent bilateral disease, and more frequent occurrence of disease among men. The potential for a genetic cancer susceptibility initiated a massive international, collaborative hunt for the specific gene or genes involved.

In 1994, two international groups simultaneously reported the localization and cloning of the BRCA1 gene which is now known to be associated with hereditary breast-ovarian cancer syndrome.[13,14] Many laboratories scattered around the world now offer testing for BRCA1. The American Society of Human Genetics[15] and the American Society of Clinical Oncology[16] recommend these tests only be offered in a research structured environment using teams composed of physicians, geneticists, genetic counselors, and mental health associates. Approximately 10 percent of breast cancer is regarded as hereditary with about one-half this number due to mutations in BRCA1.[17] Eighty-five percent of women inheriting the mutant BRCA1 gene will develop breast and/or ovarian cancer within a full 70-year lifespan.[18]

Familial adenomatous polyposis (FAP) is characterized by the occurrence of multiple family members with hundreds to thousands of colonic polyps.[19] These polyps frequently progress to adenomas and to malignant adenocarcinomas. Virtually 100 percent of persons with FAP will develop colon cancer should they live long enough. In 1987, Bodmer et al[20] reported linkage studies showing the gene to be located on the long arm of chromosome 5. The gene identified as APC (adenomatous polyposis coli) has since been specifically mapped to chromosomal region 5q21-22.[21] The APC gene can be tested for, and in an FAP family, a negative finding returns the family member to the general population risk for colon cancer.

While just one percent of colon cancer is of the FAP type, as much as five to 10 percent falls into the hereditary nonpolyposis colon cancer (HNPCC) category.[7] The International Collaborative Group on HNPCC has defined an HNPCC kindred as one meeting the following three minimal criteria: (1) There should be at least three family members with colorectal cancer, two of whom are first-degree relatives; (2) There should be at least two generations represented; (3) At least one individual should be less than 50 years of age at diagnosis.[22] A 1996 study of 74 families meeting these criteria showed 68 (92 percent) to involve a mismatch repair gene.[23] The mismatch repair genes including MSH2, MLH1, PMS1 and PMS2 can be tested for by a variety of methods. A carrier of a mismatch repair gene has an extremely high likelihood of having colon cancer.

In 1993, germline mutations (inherited mutations) of the RET proto-oncogene were found to be associated with multiple endocrine neoplasia type 2A (MEN-IIA).[24] Subsequently, mutant RET has been associated with MEN-IIB and familial medullary thyroid carcinoma.[25] While many oncogenes are known to be associated with the somatic neoplastic process, RET is one of the very few known to be passed generation to generation. Family members that do not inherit the RET oncogene are not at high risk of developing C-cell hyperplasia and medullary carcinoma and need not have annual cancer screening tests because of familial risk. Their risk of thyroid cancer is that of the general population risk.

HOW TO IDENTIFY A HEREDITARY CANCER FAMILY

At an initial patient interview or during a periodic general medical physical, the patient should be asked to provide a full three-generation, cancer-sensitive family history which would be drawn into a standard pedigree (see Figure 1 for an example). The presence of malignancy of any kind, the age of diagnosis, bilaterality, and metastasis should be noted for all family members. In certain cases, medical documentation of specific patients would be desirable.

Pedigrees are usually classified as *sporadic* where the number of cases is thought to be too few to indicate an increased familial risk, *familial* where there is an excessive number of family members with a malignancy, and *hereditary* where the family members with a malignancy fall into a recognized pattern of inheritance. Most hereditary forms of cancer fall into an autosomal dominant pattern of inheritance with reduced penetrance. Because of late onset of disease, early death, small family size, or other factors certain critical members of the family will not have demonstrated the disease. An accurate, complete pedigree on all patients is of vital importance because a large number of malignancies in a family history is the highest risk factor. Because new information about relatives being diagnosed with cancer is always accumulating, the family pedigree should be updated regularly.

An early age of onset or multiple sites of cancer are now known to be features of hereditary cancer. While taking the family history, even though the interest may, for instance, be breast cancer, all malignancies in the family should be noted. In addition, the age of onset and the presence of bilateral disease or a person with multiple primary malignancies is of particular importance.

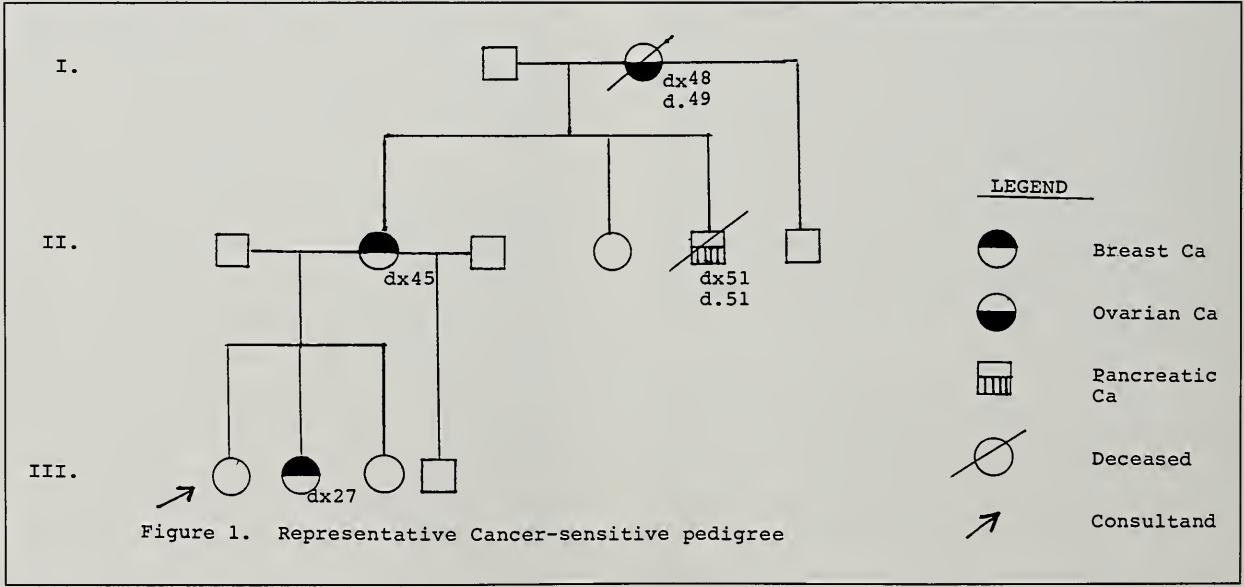

Figure 1. Representative Cancer-sensitive pedigree

FIGURE 1.

Table 1. STATUS OF PRESYMPTOMATIC TESTING FOR HEREDITARY CANCER SYNDROMES. Most DNA tests are on a research basis only.

Syndromes	DNA Testing	Type of Test	Gene Location	Gene Name
Ataxia Telangietasia (AT)	YES	Direct	11q22	ATM
Beckwith-Wiedmann syndrome	YES	Direct	11p15	P57 KIP2
Bloom syndrome	YES	Direct	15q26.1	BLM
Cowden disease	YES	Direct	10q23	PTEN
Familial adenomatous polyposis	YES	Direct	5q21	APC
Familial Breast Cancer 1	YES	Direct	17q12.23	BRCA1
Familial Breast Cancer 2	YES	Direct	13q12	BRCA2
Familial melanoma	YES	Direct	9p21	P16
Fanconi's anemia	YES	Direct	9q22.3 16q24.3	FACC FACA
Hereditary nonpolyposis colorectal cancer	YES	Direct	2p16 3p21 2q32 7p22	MSH2 MLH1 PMS1 PMS2
Hereditary papillary renal cancer	YES	Direct	7q31	MET
Hereditary prostate cancer	NO	N/A	1q25 others?	unknown
Li-Fraumeni	YES	Direct	17p13.1	P53
Multiple endocrine neoplasia, type 1	YES	Direct	11q13	MEN1
Multiple endocrine neoplasia, type IIa and type IIb	YES	Direct	10q11.2	RET
Multiple exostoses	YES	Direct	8q24.1 11p11-13 19p	EXT1 EXT2 EXT3
Neurofibromatosis, Type 1	YES	Direct	17q11.2	NF1
Neurofibromatosis, Type 2	YES	Direct	22q12.2	NF2
Neviod basal cell carcinoma syndrome	YES	Direct	9q22.3	PTCH
Palmoplantar keratoderma	NO	N/A	17q25	Unknown
Peutz-Jegher syndrome	NO	N/A	Unknown	Unknown
Retinoblastoma	YES	Direct	13q14.3	RB1
Von Hippel Lindau	YES	Direct	3p25	VHL
Wilms' tumor	YES	Direct	11p13	WT1
Xeroderma pigmentosum	YES	Direct	Multiple	XPB XPD XPA

From: Schneider, KA; Counseling About Cancer: Strategies for Genetic Counselors. p122, Dana Farber Inst., 1994 and Fearon ER; Human Cancer Syndromes: Clues to the Origin and Nature of Cancer. Science 1997; 278:1043-1050.

If a family history suggests the presence of a hereditary cancer syndrome, the patient could be referred to a cancer genetics facility for counseling and possible testing. At present, there is testing available for the cancers itemized in Table I. As noted previously, it is highly recommended that all testing be conducted within the context of the multidisciplinary team. This multidisciplinary team should consist of geneticists, genetic counselors, oncologists, cancer surgeons, and mental health professionals knowledgeable in cancer and genetics.

CANCER GENETIC COUNSELING

Most geneticists agree that the majority of patient referrals result in a negative finding. Cancer is an extremely common disease and careful evaluation often finds that the family member is at no greater risk than anyone else in the general population. The majority of patients leave the genetic evaluation with a certain sense of relief of anxiety.

In those cases where an increased risk for hereditary cancer is noted, there is often specific molecular testing that can be offered to rule out the presence of a cancer predisposing gene. Even with a dominantly inherited cancer predisposing gene, 50 percent of at-risk individuals will be shown to not have inherited the gene. This is extremely important information because the lack of the specific gene in question returns this family member to the general population risk for the particular malignancy. Even if there are several affected family members, this individual is not at high risk for the disease. In the event that the malignancy in question dictates that the family member undergo periodic testing such as the pentagastrin challenge test for multiple endocrine neoplasia or colonoscopy for colon cancer, a negative genetic test would alleviate the continued need for such regular, expensive screening.

If genetic testing should confirm that the patient is carrying a cancer predisposing gene, there are currently only a few measures that can be undertaken to reduce that person's personal risk for developing a malignancy. The use of birth control pills or Tamoxifen might be helpful to reduce the onset of breast or ovarian cancer.[26] Certain chemoprevention trials are currently underway to reduce the risk of colon cancer.[27] Certainly, the clearest positive aspect of genetic testing at the present time is to identify which individuals which must undergo thorough, periodic testing by high resolution imaging techniques and specific molecular markers. The best prognosis continues to be ascribed to those individuals with the earliest diagnosis.

NEGATIVE ASPECTS OF CANCER GENETIC TESTING

There are still no national regulations prohibiting the use of genetic information by the insurance industry in a discriminatory manner. Until this occurs, it is mandatory to discuss these possibilities with the patient. If a patient is already being treated for cancer, the testing will likely have no effect on the patient's insurance. However, the tests may not be covered even though the results could be of great value to family members.

At the present time, 26 states have enacted laws prohibiting the insurance industries in those states from using genetic information/testing in setting rates or denying coverage.[28] Similar legislation was passed by the South Carolina State Senate in 1997 and by the State House of Representatives in early 1998. The Interspecialty Council of the South Carolina Medical Association has voted to endorse the passage of this legislation. On May 26, 1998, Governor David Beasley signed the Privacy of Genetic Information Information Act.

SUMMARY

All cancer can be described as genetic, that is, due to altered DNA. Many of these mutations will be accumulated during the normal division of cells. However, some people may inherit abnormal genes, which predispose those individuals to high risk of certain malignancies. These individuals can sometimes be identified as having a family history of affected individuals, some of which might have early age of onset or multiple malignancies.

Specific genes have been identified as being associated with certain of these malignancies. The hereditary cancers include (but are not limited to) ovary, breast, colon, endometrium, and to a lesser extent, prostate, skin, and pancreas. Some of these cancer predisposing genes are highly penetrant with up to 80 to 90 percent of gene carriers developing the associated malignancy within a 70 year life expectancy. Molecular testing for the presence of cancer predisposing genes is available for many of the hereditary syndromes.

While there currently is no way to correct a mutant gene, early detection and some techniques of chemoprevention are of clinical value. People who fear that they are at high risk only to learn that they are not, can benefit from the relief of anxiety through the genetic counseling process. ❐

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RENAL ARTERY STENOSIS: CLINICAL PICTURE, FREQUENCY, AND MANAGEMENT*

ANTONIO V. BAUTE', M. D., F. A. C. C.**
ATIFF SOHAIL, M. D.

Renal Artery Stenosis (RAS) as a secondary cause of arterial hypertension has been considered to be rare. In fact, its frequency has been quoted to be only in the one to four percent range.[1,2] However, its relevance has been brought up to light with a better understanding of the renin-angiotensin-aldosterone system participation in the pathophysiology of arterial hypertension, congestive heart failure, and ischemic nephropathy. Consequently, plenty of publications pertaining to clinical, physiological, angiographic, and scintigraphic findings in RAS have been written during the last 30 years. Clinicians and surgeons taking care of patients with systemic atherosclerosis, arterial hypertension, and renal insufficiency have been challenged to deal with a variety of clinical presentations, including, but not restricted to refractory arterial hypertension, progressive renal insufficiency, and congestive heart failure.[5] Obstructive lesions of the renal arteries in these patients have more frequently been corrected with the currently available approach of either surgical[8] or percutaneous interventions.[9] Contrary to years passed, attention is being given to the presence of RAS in the elderly, as it is clear that the overwhelming majority of cases is found in the aging population; particularly, in patients with hypertension and over 50 years of age where the frequency of this condition is quite high.

Of great interest is the association of RAS with generalized atherosclerosis of both peripheral and central vascular beds.[2] Domestic and foreign publications have described a higher incidence of obstructive plaques of the renal arteries in as many as 40 to 50 percent of patients with the diagnosis of systemic atherosclerosis, regardless of the presence of Arterial Hypertension. This type of information has been obtained by post-mortem examinations,[3] as well as angiographic studies. Based on these facts, the presence of RAS should be seriously entertained, as it is clear that the burden on the renal parenchyma from prolonged ischemia is quite deleterious on the excretory function in addition to the induction of renin release with the associated consequences of fluid retention, refractory hypertension and azothemia. Likewise, it is important to keep in mind that the presence of bilateral renal artery or single kidney artery stenosis can be adversely affected by the use of ACE-inhibitor or Angiotensin antagonists, as they can induce acute renal failure.

The occurrence of chronic renal ischemia secondary to bilateral RAS or involvement of a solitary kidney are believed to be the origin of a newly described entity. This entity consists of recurrent and refractory congestive heart failure (CHF) in the presence of normal systolic and diastolic functions that are apparently secondary to excessive activation of the renin/angiotensin/aldosterone system and the attendant increased retention of water and sodium. Ultimately, this prolonged ischemia on the renal parenchyma will be responsible for permanent damage on the excretory capabilities of the glomeruli resulting in renal insufficiency.[1]

In the last 10 years, with the increasing role of percutaneous techniques on blood vessels, the renal arteries have been considered an easy and natural target for balloon and stenting procedures (as illustrated in Figure 1). We have been involved in doing this kind of work for the last seven years and so far have encountered an adequate clinical and technical response through this approach. To further expand the already available information, we embarked on reviewing the literature pertinent to the repair of stenotic renal arteries by surgical and percutaneous techniques.

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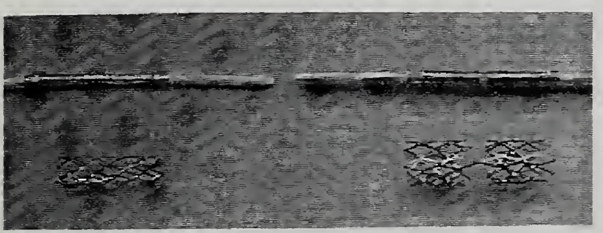

Figure 1. Angiograms of bi-lateral RAS illustrate pre and post PTA/stent appearance of renal arteries. Reproduced with permission from Wilms et al.

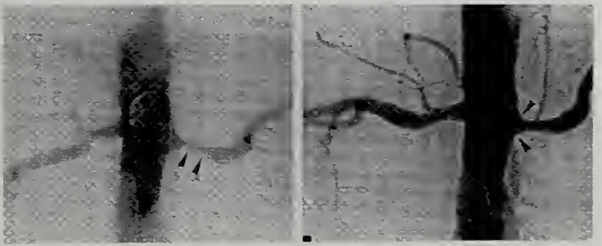

Figure 2. Photographs of commonly used stents at the renal arteries are shown.The left stent is the preferred design because of less probability of restenosis. The right stent (articulated) allows for more flexibility on negotiating tortuous segments. (Manufactured by Johnson & Johnson Interventional Systems)

METHODS

We performed a literature search of papers published both abroad and in the US in reference to repair of stenotic renal arteries: the technique used, success rate, mortality and morbidity, etiology of the lesions, and rate of restenosis associated with each of the reparative procedures. Our search spanned from 1990 through 1997, with the source of material from MEDLINE via the Internet, and including over 120 articles and abstracts. Finally, our review included papers related to diagnostic techniques considered to be useful in ascertaining the presence and severity of RAS.[1,7,5]

RESULTS

The total number of patients studied and reported in our literature search was 3,053 (Table 1), out of which, 2,421 were treated surgically and 1,082 patients underwent percutaneous revascularizations. No effort was made to breakdown our population by sex or any other category, as our only interest was to establish which of the techniques appeared to be the safest and more practical approach to this condition.

Among the non-invasive diagnostic tests considered to be more sensitive and with the best predictive value, Duplex scanning, Ace-inhibitors Renal Scintigraphy and MRI-angiography stood as the most useful ones. However, in all series, conventional abdominal or selective renal angiograms were necessary for a final diagnosis.

Systemic atherosclerosis appeared as the number one cause of RAS, with 75 percent of the reported cases being due to it. The remaining 25 percent of cases were mostly due to Fibromuscular Dysplasia and less frequently to some sort of aortitis. In only 75 to 80 percent of cases was arterial hypertension found and considered to be the main reason for any form of treatment.

The rate of mortality were remarkably different when percutaneous and surgical approaches were compared. In the surgical group, the mortality rate represented 5.9 percent. In contrast, the percutaneous interventions (balloon angioplasty or vascular stenting) were associated with 1.2 percent mortality rate for the entire group of patients (Table 1). The associated morbidity with the mode of treatment differed too, but less strikingly for the surgical cohort this was 9.8 percent versus 7.1 percent for the percutaneous group. Among papers published in Europe and the US, there was a disparity in the mortality rate as well, with the correspondent number for the US centers being 5.7 per-

Table 1. Comparison Between the Rate of Complications for the Surgical and Percutaneous Therapies.

	Surgical	%	**Percutaneous s**	%	**Total**	%
No.	2421	79.2	1082	20.8	3053	100
Mortality		5.9		1.2		
Morbidity		9.8		7.1		
Restenosis s		11.2		16		

Table 2. Beneficial Response from Renal Artery Revascularization

Patient Group	Surgical	Percutaneous
Hypertension	78%	65%
Renal Function	40% - 50%	40% - 50%

cent versus 11.5 percent for European studies.

Both therapeutic modalities had beneficial effects on the control of arterial hypertension, with 78 percent positive response in the surgical group and a 65 percent improvement for the angioplasty/stent group (Table 2). Both procedures are associated with permanent cures. However, the best results are obtained in fibromuscular dysplasia in contrast to atherosclerotic obstructions (22 percent versus eight percent) respectively. In cases with progressive renal insufficiency, both therapies offer beneficial results in 40 percent to 50 percent of cases.

Finally, the percentage of patients with restenosis at long-term follow-up was not significantly different, with 16 percent in the percutaneous intervention group and 11.2 percent in the surgical group. However, it is important to know that in the surgical cohort, 18.2 percent of the patients treated ended up having a nephrectomy.

DISCUSSION

Adequate follow up studies of the natural history of renal artery stenosis demonstrate a rate of progression in 20 percent of patients yearly, including a rate of occlusion in five percent of patients per annum.[5] These events are associated with worsening levels of hypertension and declining renal function. Conservative estimates about the contribution of ischemic renal pathology to the pool of chronic dialysis patients puts it up to 14 percent, however, if the same prevalence is determined in the elderly population, this factor may be as high as 50 percent. These numbers underscore the relevance of RAS in morbidity, cost of therapy, and in lifestyle in the affected groups, particularly when it has become very clear that it affects the elderly population more frequently. Because of these reasons, RAS should be sought diligently when clinically suspected, as a delayed diagnosis may represent additional organic damage to the kidneys with its attendant complications.[1] Up to 49 percent of patients found to have peripheral vascular disease will also have RAS,[2] and its documentation can be carried out during the routine angiographic or ultrasonographic studies done on these patients as part of their work-up. Likewise, it is important to recognize the fact that a very high number of patients with suspected or unsuspected RAS have significant coronary artery disease.[4] The association is described between 12 percent and 58 percent of cases studied simultaneously for both entities.

In spite of the ongoing controversy in the literature dealing with which of the available techniques is more suitable for the treatment of Renal Artery Stenosis and its associated sequelae, our data indicate that percutaneous interventions, when appropriately applied, are safe, simple, and perhaps more cost effective than the surgical counterpart. It is clear that the major difference in mortality is secondary to the high incidence of ischemic heart disease in patients with renovascular disease,[4] and that in spite of extensive work-up, still have a high chance of intra-operative complications, including death. In our review and analysis of the different reports dealing with balloon angioplasty and stenting of the renal artery, it became very obvious that stents offer lower rates of complications and better outcome in the long term. Unquestionably, for ostial lesions of the renal arteries, the best suited approach is stenting when compared to balloon angioplasty because, as it has been demonstrated in other vascular beds, ostial lesions have a great deal of elastic recoil and plaque burden from the aorta itself. Like with coronary vessels, an improved technique on the placing of stents and the use of high pressures together with adequate sizing of the arteries, should in the long run reduce the rate of restenosis to 10 percent or less. In our series, this rate approaches eight percent and a more recent report cites numbers below or equal to 10 percent. An ongoing randomized trial of surgery versus stents for ostial lesions should bare the aforementioned possibilities and the associated rate of complications inherent to each therapeutic modality.

SUMMARY

Our review has demonstrated a high prevalence of RAS in the elderly population, particularly the group affected by atherosclerosis, as well as disclosing the potential benefits of early diagnosis, treatments, and the associated morbidity/mortality of each corrective intervention. ❐

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Who's WATCHING OUT For You?

From providers to community leaders, researchers to educators, and government officials to citizens, the National Rural Health Association's members seek to improve the health care of rural Americans through advocacy, communications, education and research.

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SCMA NEWSLETTER

A PUBLICATION OF THE SOUTH CAROLINA MEDICAL ASSOCIATION

Audria Belton Benn, Editor
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July 1998

MEDICARE UPDATE

"Refiled—Second Request" Claims: Some Medicare billing software automatically prints "refiled—second request" or "tracer" at the top of the hard copy claims that are being generated for the second time. However, if you are sending a claim in as a new claim with medical documentation after a diagnosis denial, it will not be a "second request" or "tracer" claim in Medicare's eyes. It will be a new claim. Due to new regulations instructing Medicare not to provide status information except through CSI or the ARU, any claims that come into their office with "refiled—second request" or "tracer" on them will be considered status inquiries and will be returned to you. Therefore, you have three options:

1. Ask your software vendor to remove "refiled—second request" or "tracer" from your claims.
2. Scratch out "refiled—second request" and "tracer" from your claims.
3. If the claim really has processed previously and you were paid for a portion of it, file a corrected claim and mail it to:

Medicare Part B Customer Service, AK-145
Palmetto Government Benefits Administrators
P.O. Box 100190
Columbia, SC 29202-3190

Corrected Claims Tips: Many of the corrected claims Medicare receives have line items crossed out or circled, and the total charges are not corrected. Please clearly indicate which lines need to be processed on the corrected claims, then correct the total charges. Please refer to page 12 of the June 1998 *Medicare Advisory* for more information about corrected claims.

Medicaid Identification: To speed up claims processing, you must correctly identify Medicare beneficiaries who also have Medicaid. The 10 digit numbers given in block 9 of the HCFA-1500 claim form are not always identified as Medicaid numbers for those who have Medicaid. Please write or type the word Medicaid in block 10d of the claim form. ❐

CAPSULES

Randolph D. Smoak, Jr., M.D., from Orangeburg, has been reelected to serve as a trustee of the American Medical Association (AMA) Board of Trustees. He will serve as chairman of the Board of Trustees.

J. Chris Hawk, III, M.D., of Charleston has been elected to serve on the AMA Council on Scientific Affairs. The council is responsible for reviewing developments in medicine and biomedical research. As a result of the advice of the council, the AMA can base related policy on sound scientific principles.

Richard K. Harding, M.D., of Columbia has been elected vice president of the American Psychiatric Association.

Stephen P. Williams, J.D., Senior Vice President and General Counsel, South Carolina Medical Association (SCMA), has been reappointed to serve on the Executive Committee of the AMA National Litigation Center. The litigation center develops policy and strategies for preserving the patient-physician relationship.

PHYSICIANS CARE NETWORK UPDATE

Physicians Care Network (PCN) now has 6,211 participating physicians and 636 participating ancillary providers. With the addition of St. Eugene Community Hospital, effective June 1, 1998, PCN now has 83 participating hospitals. PCN currently has 74 contracted groups and nine groups pending for contracts with approximately 49,000 covered lives. As contracts are received, we will provide more information.

Early notification of address changes will ensure that there are no claims payment delays.

Fidelity Group, Inc. (International Workers Association) terminated 6/15/98 and Edgefield County Government 7/1/98. Due to the sale of Mid Atlantic TPA, the following groups have terminated: McLaughlin Motors, 6/1/98; Tate Metal Works, 6/1/98; Cayce Company, 6/1/98; and Pride Mechanical and Fabrication Company, Inc., 5/1/98.

NEW GROUPS

- General Foods, Bamberg; effective 1/1/98; Access/Peer Review.
- Kimlor Mills, Orangeburg; effective 4/1/98; Access/Utilization Review.
- Carolina Filter; Sumter; effective 4/1/98; Access/Utilization Review.
- Sea Island Comprehensive, Johns Island; effective 3/1/98; Access/Peer Review.
- The Provident, Statewide; effective 1/1/98; Access/Peer Review.
- Tomlinson Sales Company, Florence; effective 4/1/98; Access/Utilization Review.

If you have questions about PCN, please contact Cindy Osborn, Network Coordinator, at (803) 798-6207, extension 257 or statewide at (800) 327-1021. You may also send an e-mail message to cindy@scmanet.org.

NEW POLICIES AND PROCEDURES

CONTINUING MEDICAL EDUCATION REQUIREMENT

The Board of Medical Examiners has adopted a continuing medical education (CME) requirement for all physicians currently practicing in the state. Beginning January 1999, every licensed physician must begin to acquire at least 40 hours of Category 1 CME every two years in order to re-register his/her license. Physicians will be required to report CME completion biennially during license re-registration. Compliance will initially be monitored through random audits. ❐

CODING CONCEPTS

Q. Our practice has been contracted to provide sport physicals for several local high schools. Which code(s) would you suggest we use to track these services? Also, what would be an appropriate diagnosis code?

A. Code selections to report or track sports physicals would be based on the actual service provided by the physician. If the physician documents a comprehensive history and physical, you would use a code from Preventive Medicine Services (99381-99397) based on the age of the student. If, however, the physician only documented a brief, detailed, or extended history and examination, you would select a code from the Evaluation and Management section (99201-99215).

With both code series, you will need to determine if the student is a new patient or an established patient. To report the medical necessity or justification for the service, refer to the V codes in ICD-9-CM. V codes are used when the patient presents for reason other than illness or injury, to report factors that influence patient health, or for statistical information. The correct ICD-9-CM code would be V70.3, other administrative services.

CODING TIP

Before selecting a code, be sure that the documentation supports the level of service and billed and that information for the diagnosis is complete. List any conditions or factors that affect the patient's care or conditions being treated for that visit. ❐

Coding Concepts *is reprinted with permission of Wanda Adams, CPC, Healthcare Consultant and published author.*

MARK YOUR CALENDAR

The SCMA's Annual Meeting and Scientific Assembly is scheduled for April 29-May 2, 1999, at Charleston Place Hotel, Charleston, South Carolina.

SCMA WORKSHOPS

SPECIALTY CODING ROUND TABLES
AUGUST 6, 1998

No one area affects a practice's income more than coding. Improved coding, increased speed, and greater accuracy will benefit you in filing claims with both Medicare and commercial carriers. Wanda L. Adams, CPC, will review, in two separate half-day sessions, the techniques and conventions of CPT coding as they affect medical and surgical specialties. **Register by July 28, 1998.**

Medical Practices: 9:00 a.m. – 12:00 p.m.; Registration: 8:30 a.m.
Surgical Practices: 1:00 p.m. – 4:00 p.m.; Registration: 12:30 p.m.
Columbia, Adam's Mark Hotel

THE $100,000 OFFICE MANAGER
August 12, 1998

Now, more than ever, medical practice managers and physicians are required to look upon their organizations as businesses. As such, they must streamline operations and manage costs in order to become more efficient and effective in an increasingly competitive environment. In this workshop, participants will review essential techniques and tips to manage the medical practice, ensure revenue enhancement, reduce overhead, and curb unnecessary spending. **Register by August 3, 1998.**

9:00 a.m. – 4:00 p.m.; Registration: 8:30 a.m.
Columbia, Adam's Mark Hotel

Space in each program is limited, so be sure to register early. *If you have any questions, please contact Melissa Hamby, extension 253, at 798-6207 in Columbia, or at (800) 327-1021 statewide, or by e-mail at melissa@scmanet.org.*

YEAR-END LEGISLATIVE SUMMARY

The South Carolina General Assembly has ended another session. Despite the delays caused by the flag debate and video poker, South Carolina physicians enjoyed a relatively good year in the Legislature.

The most significant piece of legislation to pass this year was S.310, sometimes referred to as the "Patient Choice Bill" or the "Patient Protection Act." At press time, the bill is awaiting the Governor's signature. The most important part of this legislation is specific language declaring all hold harmless and indemnification clauses in managed care contracts which shift legal liability for negligence from managed care organizations to physicians to be void as a matter of public policy. The bill also bans "gag" clauses in managed care contracts and requires managed care companies to provide written information to enrollees about differences in benefits between in network and out-of-network services and to explain covered and non-covered benefits. Citizens employed by companies with more than 50 employees who are only offered a closed-panel health plan must be offered the opportunity to purchase an open-panel health plan. This choice does not apply to state employees or employees of companies operating under the federal law known as ERISA.

The Legislature also passed legislation making physician-assisted suicide a statutory criminal offense, restricted the availability of information gained through genetic testing, and passed a bill mandating coverage for pap smears, mammograms, and prostate cancer screening, reconstructive surgery following mastectomies, as well as authorizing limited direct access to dermatologists and OB-GYNs. ❐

SOUTH CAROLINA SUPREME COURT RULES IN PHYSICIANS FAVOR

In a landmark South Carolina Supreme Court decision, the court has ruled physicians are not liable under products liability theories or warranty theories for defects in the products they use in the provision of medical services. The case arose from a lower court ruling in the consolidated breast implant litigation holding physicians were liable under warranty and products liability theories. The SCMA participated in the case as a friend of the court along with the AMA, the AMA Litigation Center which represents 44 states, the SC Health Alliance, and the SC Dental Association.

NEW FREE WEBSITE FOR PRIMARY CARE PHYSICIANS

Primary, a new, free web-based publication at http://ccc.silverplatter.com focuses on primary care physicians' clinical needs and responds to their time restraints.

Primary's editorial formula consists of current, patient care-oriented, clinical information complemented by bibliographic evidence and reviews and is published online on a biweekly basis. Each issue of *Primary* focuses on a different current clinical topic in medicine that explores practical patient care issues, provides commentary on recent evidence based research, offers comprehensive related literature searches compiled by a medical librarian, provides expert clinical advice and pearls, and presents online continuing medical education programs related to the current topic.

Primary annotates all of its original articles with a comprehensive directory of related websites that are evaluated and indexed for immediate access. Additionally, physicians have unlimited access to previous full text *Primary* issues.

❐

SUMMER SCHOOL OF GERONTOLOGY

Winthrop University will host the Summer School of Gerontology August 2-7, 1998. The summer school, sponsored by the Department of Health and Human Services (DHHS) and the Office on Aging, exists to enrich the skills and renew the dedication to those who serve to improve the health and welfare of older South Carolinians.

For information about courses, fees, or registration, contact Sylvester Management Corporation at (803) 781-1683 or DHHS, Office of Aging, at (803) 253-6177 or (800) 868-9065. ❐

CONFUSED ABOUT COMPUTER UPGRADES OR YEAR 2000 COMPLIANCE?
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NEUROSYPHILIS MIMICKING HERPES SIMPLEX ENCEPHALITIS*

FLOYD ANGUS, M. D.
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Although syphilis is a fabled masquereder of other diseases, certain manifestations are infrequently encountered. We observed a patient with meningovascular syphilis who presented with confusion and temporal lobe symptoms and signs suggesting herpes simplex virus encephalitis. Inability to find a similar case in a MEDLINE search of the literature since 1975, including a thorough review of diseases mimicking herpes simplex encephalitis,[1] prompted this report.

CASE REPORT

A 34-year-old man presented to the emergency room with a three-day history of altered mental status and drooling. Two weeks prior to admission, he had been treated and released for polysubstance abuse, especially of crack cocaine. He had a remote history of head trauma and had recently been beaten during an altercation. There was no prior history of venereal disease.

Examination revealed an incoherent, disoriented, mildly agitated young man with excessive salivations who answered all questions and commands with "yes." Lumbar puncture revealed clear cerebrospinal fluid (CSF) with 12 red cells and 26 nucleated cells per cmm, of which one percent were neutrophils, 91 percent were lymphocytes, and eight percent were monocytes-histiocytes; protein content 94 mg/dL; and glucose content 58 mg/dL. His CSF reagin test for syphilis (VDRL) was reactive at 1:2. Serum VDRL was reactive at 1:32 with a reactive fluorescent treponemanl antibody-absorbed (FTA-ABS) test. Tests for cryptococcal antigen in CSF, and for antibodies against human immunodeficiency (HIV-1 and HIV-2) and herpes simplex (HSV 1 and HSV 2) viruses in serum were negative. His urine tested positive for cannabinoids but was negative for cocaine metabolites and opiods. Computerized tomography (CT) of the brain showed diffuse cerebral atrophy with probable encephalomalacia affecting the left temporal lobe. Magnetic resonance imaging showed an abnormal enhancing lesion within the medial left temporal lobe with additional prominent leptomeningeal enhancement of the left temporal lobe region suggestive of herpes simplex encephalitis (Figure). Electroencephalogram was abnormal due to focal slowing over the left cerebral hemisphere affecting mainly the left temporal area with

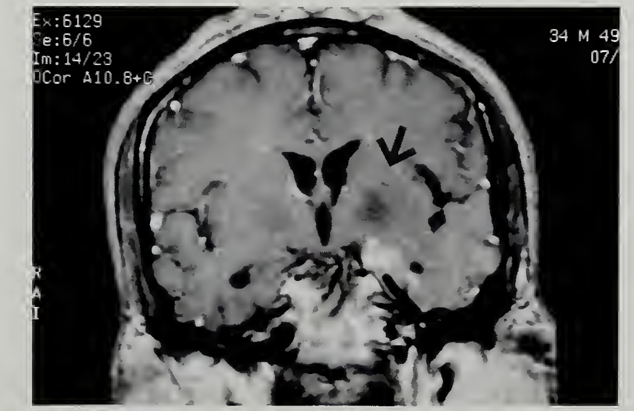

Figure. Lesion within the medical aspect of the temporal lobe and the upper diencephalon (arrow), interpreted as suggestive of herpes simplex encephalitis but also consistent with thrombotic stroke secondary to meningovascular syphilis.

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infrequent sharp activity noted over the left hemisphere posteriorly.

He was treated initially with acyclovir 700 mg intravenously every eight hours and ceftiaxone one gram intravenously every 24 hours. When the CSF VDRL was found to be reactive, he was placed on penicillin G, 20 million units daily by continuous infusion. Further testing of CSF revealed a reactive FTA-ABS and the presence of IgM and IgG antibodies against *Treponema pallidum* (Specialty Laboratories, Santa Monica, California). Assay of CSF for HSV 1 and HSV 2 DNA by the polymerase chain reaction was negative (Specialty Laboratories, Santa Monica, California). Acyclovir was discontinued on the 17th day when this latter finding became available. Penicillin G was continued for 21 days. He made a gradual recovery but at the time of discharge, still had speech impairment.

DISCUSSION

Although a reactive VDRL in a CSF sample uncontaminated with visible blood is considered to be essentially diagnostic of past or present neurosyphilis,[2] we considered the possibility that our patient could also have herpes simplex encephalitis especially since temporal lobe findings dominated the clinical picture. The MRI findings and electroencephalographic findings were consistent with herpes encephalitis, although not diagnostic.[3] Additional studies might have included cerebral angiography for demonstration of generalized arteritis in neurosyphilis[4] and brain biopsy for demonstration of the virus in herpes simplex encephalitis. We elected to treat for both possibilities until the results of the polymerase chain reaction (PCR) for herpes simplex virus DNA was reported to be negative. This test has recently been found to be 95 percent to 98 percent sensitive in biopsy-proven herpes simplex encephalitis,[5,6] but false-negative tests can occur. The diagnosis of active neurosyphilis in our patient was strengthened by the demonstration of intrathecal antitreponemal antibody production.[8,9]

Meningovascular syphilis usually presents with abrupt onset of neurologic defects caused by occlusion or thrombosis of large and medium-sized vessels affected by Huebner's arteritis, a lymphocytic and plasma cell infiltration of the adventitia and vasa vasorum.[2] Because arteritis is usually diffuse within the central nervous system, computed tomographic and magnetic resonance imaging usually show multiple areas of brain infarction.[10] In a series of 42 patients reported in 1946, hemiparesis or hemiplegia was present in 83 percent, and aphasia in 31 percent of cases.[11] In a recent series, stroke was the most frequent presentation of neurosyphilis in patients without HIV infection (31 percent of cases).[12] Transient aphasia has been reported with syphilis confined to the meninges, and aphasia is a characteristic feature of the paretic form of neurosyphilis.[13] Focal mass lesions also occur in neurosyphilis and might cause aphasia.[14] Our patient presented with aphasia without hemiparesis, indicating that the pyramidal tract pathways were spared. Whether cocaine use or head trauma might have predisposed our patient to a localized presentation of neurosyphilis is unclear. Our experience reinforces the importance of considering alternative diagnoses in patients with suspected herpes encephalitis and also of "thinking syphilis" in any patient with an unexplained neurologic deficit.

SUMMARY

We report the case of a 34-year-old man who presented with confusion and temporal lobe symptoms and signs without motor neuron involvement, suggesting herpes simplex encephalitis, as a reminder to "think syphilis" in all patients with unexplained neurologic deficits. ❐

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COMMUN-I-CARE: EXPERIENCE IN THE FIRST FOUR YEARS

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The medically uninsured in South Carolina number approximately 600,000, as estimated from hospital billing data and comprise more than 15 percent of the state's total population. These estimates are in line with the national Current Population Survey conducted from 1990 through 1993 of families from each state in the U.S.[1] Roughly one-half of the uninsured, or 300,000, do not qualify for federal assistance programs such as Medicaid and Medicare (estimates from hospital billing data). Many of these individuals have chronic health problems, including hypertension and diabetes, and they are less likely to be receiving appropriate preventative health care services. Lower socioeconomic status is associated with a greater prevalence of risk factors including hypertension and more cardiovascular sequelae.[2] Moreover, the cost of medications for managing long-term conditions such as hypertension is often an obstacle for those of lower socioeconomic status and has been linked to poorer health outcomes.[3] The uninsured and underinsured appear to utilize emergency rooms for primary care more often than the insured, and they are more likely to be hospitalized with complications from preventable problems.[4,5]

These observations suggest that the medically uninsured suffer poorer health as a result of misallocation of health care resources away from primary and secondary prevention and toward the high costly management of acute and chronic complications. The hospital costs estimated from billing data for stroke and heart attack in South Carolina were $3.8 billion in 1995. A substantial portion of this expense is most likely certainly attributable to preventable problems, especially in the uninsured. In addition, more than 50 percent of end-stage renal disease in South Carolina is attributable to hypertension and diabetes. As we will show, hypertension and diabetes are the two most common reasons clients contact Commun-I-Care (CIC).

In response to the non-emergency health care needs of this large group of predominantly "working poor" uninsured individuals, CIC was initiated in January 1993 by the Palmetto Project. CIC is based on a model developed by Kentucky Governor Brereton C. Jones in 1986. CIC is one of only three statewide programs of its kind which is fully functional.

CIC is a model of simplicity in concept and function. The heart of CIC is its volunteer-based health care network which includes physicians and physician assistants, nurse practitioners, pharmacists and pharmaceutical companies, dentists, hospitals, and laboratory services. Uninsured individuals in need of non-emergent health care services access CIC central office in Columbia, South Carolina, using a toll free system (1-800-763-0059). Prospective clients receive a one-page application to assess eligibility. Individuals who qualify based on lack of health insurance and income level are matched to health care providers and companies that have agreed to donate their time, expertise and/or products. Services are provided at no cost to clients who qualify based on lack of health care insurance, inability to qualify for other coverage, and an income less than 125 percent of the federal poverty level.

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The purpose of this report is threefold. First, this paper summarizes the findings and recommendations from the evaluation of CIC programs during 1996. Second, this report will hopefully generate a greater understanding of the CIC mission and the operational plan and infrastructure to address that mission. Third, this paper is also intended to stimulate additional participation and the constructive suggestions of others who can expand the CIC effort.

TABLE 1. Summary of CIC vital statistics in 1993 and 1996.

Year	1993	1996
Participant activity		
Number of clients	1,564	3,708
Applications received	1,604	3,704
Applications approved	1,032	2,942
Referral to physician	390	722
Referral to pharmacy	222	784
Prescriptions filled	99*	7,245
Number of volunteers		
Physicians	675	1,360
Pharmacists	222	231
Dentists	0	0
Nurse practitioners	0	0
Hospitals	0	32
Pharmaceutical companies	2	4

*Prescription services began August 1993.

METHODS

The data available for program evaluation included statewide information on the numbers of clients, providers, referrals, and utilization of approved services available in the computer data bases at CIC's central office in Columbia, South Carolina. Additional information was obtained by the Survey Research Facility at the Medical University of South Carolina (MUSC). The survey data included telephone interviews completed on 277 clients in Berkeley, Charleston, Dorchester, and Richland Counties. An attempt was made to interview and survey all clients in these four counties. The participation rate was 41 percent for clients (277 of 677). A survey was mailed to all CIC physicians in the same four counties and was completed and returned by 23 percent (138 of 589).

RESULTS AND DISCUSSION

A summary of services provided and of volunteers participating in the CIC program is provided for the 1993 and 1996 calendar years (Table 1). During the 1996 calendar year, CIC received approximately 75 applications and approved roughly 60 applications each week. Approximately half of the approved applications resulted in referral to either a health care provider or pharmacist. Twenty-one percent of clients were 18 years old or less, 44 percent were 19-44, and 35 percent were 45-64. Seven of eight clients were women. Eighty-three percent of clients had a household income of $12,000/year or less.

As shown in Table 1, the number of clients and volunteers in the CIC system has approximately doubled from the first year of operations in 1993 to the fourth year of operation in 1996. The utilization and the growth in utilization of CIC services indicates a substantial need in this under served population. The voluntary response of health care providers in South Carolina demonstrates a readiness of many to meet this challenge. The initial success of the CIC model in South Carolina has received national attention as other states address the growing concern presented by the medically uninsured.[1]

The client and provider survey indicated that more than 90 percent of both groups were either very satisfied or satisfied with the CIC program. Moreover, more than 90 percent of clients would recommend CIC to a friend. Similarly, 90 percent of physicians would encourage a colleague to participate in CIC. While CIC has enjoyed a highly successful beginning in terms of utilization, growth, and satisfaction, program evaluation identified areas for improvement. For example, the roughly 2:1 ratio of approved applications to referrals for health care services (Table 1) has persisted throughout the first four years of CIC's operations. A preliminary review of the 1997 data indicates that this ratio of approval to utilization of services is continuing. CIC has the capacity to provide services for all approved services without increasing the burden on those providers who are already active, since fewer than 50 percent of available providers were active in 1996 (Table 2). Three factors, which may contribute to the discrepancy between the number of clients qualifying for CIC and referrals for services, were identified by the client and provider surveys.

Continuity of care for chronic or long-term medical conditions emerged as one of the principal factors in the under utilization of CIC services. CIC, as it is presently designed, approves clients for a single visit to a provider. In our survey, 60 percent of CIC clients were aware of the one visit policy, and 95 percent would prefer a system which provided follow-up care. The preference for continuity of care becomes even more apparent when reviewing the principal reasons clients sought help from CIC (Table 3). During the first half of 1996, the five principal health concerns or chief complaints noted most frequently by CIC clients represent chronic or recurrent conditions. Collectively, these five conditions comprise more than 60 percent of chief complaints presented by CIC clients. Not surprisingly, hypertension was the most frequent chief complaint voiced by nearly one in four CIC participants followed by diabetes in roughly one of eight. Continuity of primary care emerges as a critical factor in achieving compliance with antihypertensive medications and control of blood pressure.[6,7]

TABLE 2. Participation by CIC clients and utilization of CIC providers and services in 1996.

	Number	utilized	(%)
CLIENTS:	3,708	*877	(24)
PROVIDERS:			
Physicians	1,363	402	(29)
Pharmacists	231	98	(42)
Dentists	97	45	(46)
Nurse practitioners	42	17	(40)
Hospitals	32	8	(25)

*Referred to physician, dentist or nurse practitioner.

TABLE 3. Chief Complaints of Commun-I-Care Clients During January -June, 1996.

Diagnosis	Number	Percent
Hypertension	305	23.7%
Diabetes	181	12.5%
Arthritis/back/hip	130	10.1%
Anxiety/mood/etc.	92	7.1%
Asthma/allergies/ bronchitis	88	6.8%

*Five conditions, which are chronic or recurrent, comprise 60.2 % of CCs.

The CIC client survey suggested that the one visit policy was promoting delays in the use of approved health care visits. For example, nearly one in four clients reported that the one visit authorization caused them to delay seeing a provider. Some clients are waiting to receive care for their chronic or recurrent medical conditions until the problem becomes acute. This impression is confirmed by the discrepancy between the majority of clients initial chief complaint which reflect a chronic condition (Table 3) and the perception of physicians that the majority of CIC clients health care problems are acute or emergent (54 percent) rather than chronic (39 percent) or other.

The CIC provider survey indicated that the concern with continuity of care may be as much perceived as real. Half of the physicians responding to the questionnaire indicated that follow-up visits were being provided and that three in five of these physicians were providing the follow-up visits at no cost. Moreover, 75 percent of physicians noted that they would be willing to participate in a CIC program which included continuity of care for chronic conditions.

The present CIC policy of approving clients for a single visit appears to be reinforcing the prevailing pattern of maladaptive health care utilization in many of the uninsured which includes waiting for subclinical or mildly disabling conditions to become acute and/or disabling. This, in fact, is the principle problem that CIC intended to address. The majority of CIC clients would prefer and the majority of CIC physicians would participate in a model which included follow-up care for long-term and recurrent medical problems. The CIC Board of Directors is developing a plan to address the long-term management of chronic health problems including hypertension and diabetes, the two most common chief complaints of CIC clients. With the assistance and participation of CIC volunteers and supporters, these exciting and necessary changes should be implemented in 1998.

Lack of transportation was perceived as a significant barrier to care by a greater percentage of physicians responding to the survey than was the issue of continuity of care (55 percent versus 38 percent). This raises the opportunity to coordinate medical care for CIC clients with local community organizations including churches as well as the Department of Social Services that may be able to provide ancillary services.

The greatest barrier to utilization of CIC as perceived by staff and providers is lack of information about the program. In fact, 15 percent of physicians responding to the CIC provider survey were not familiar with CIC, and 18 percent did not recall that they had volunteered to be a CIC provider. Only seven in 10 CIC physicians were aware that CIC could provide medications, lab work, and hospitalization to their CIC patients at no cost. The lack of awareness on the availability of these other services is of special concern, since many if not most physicians are already providing office visits at no charge to the uninsured with limited financial resources. However, the physician is frequently frustrated by the inability to provide necessary medications and laboratory tests for uninsured patients with limited financial resources.

The pharmaceutical component is one of the more attractive and successful aspects of CIC. As physicians are aware, many ethical drug companies have a program for indigent patients. While these programs are meritorious, each one has different access and paper work requirements which leads to confusion and under utilization by physicians and clients. In contrast, CIC has a uniform process irrespective of the medication or pharmaceutical supplier for all drugs on the formulary. A CIC formulary is available for all participating CIC physicians to clarify which medications are included in the program. CIC patients can take their prescription to a participating pharmacy and obtain medications on the CIC formulary at no cost. The CIC pharmacist then dispenses the medication. Refills can be provided for up to one year without additional paperwork for the client or physician. The pharmacy is reimbursed in the form of an equivalent amount of medication from the pharmaceutical manufacturer participating in the CIC program. The number of prescriptions provided by each pharmaceutical company in the CIC program during 1996 are summarized in Table 4.

As with other aspects of the CIC program, efforts are underway to increase the effectiveness of the pharmaceutical component. For example, the CIC staff and Board of Directors are continuing efforts to increase the number of participating pharmaceutical houses, and, thereby, the number and range of medications on the formulary. CIC is also examining ways to further streamline and simplify the process

TABLE 4. Participating pharmaceutical companies and number of prescriptions filled in 1996.

Company	Prescriptions filled
Pfizer	5,427
Johnson&Johnson	712
*Hoechst	181
‡Eli Lilly	54

*Discontinued participation in the CIC formulary program in 1996.

‡Began participating in the CIC formulary program in November 1996.

of prescription disbursement and reimbursement for clients, physicians, pharmacists, and drug companies.

The CIC staff and Board of Directors are reviewing strategies for raising client and provider awareness about the services available through the volunteer network coordinated by the CIC program. While more funds have been allocated for advertising and program promotion in the next fiscal year, "word of mouth" has been and will likely continue to be the principle mode of information and education about CIC. In the client survey, 71 percent learned about the program from personal communication. The personal contact included the 18 percent of clients who learned about CIC from friends and neighbors, 16 percent from physicians, 15 percent from hospitals, 14 percent from the Department of Social Services, and eight percent from Department of Health and Environmental Control. In contrast, only 11 percent learned about CIC through television advertisement (eight percent), pamphlets (two percent), and billboards (one percent).

SUMMARY

The medically uninsured ("working poor") comprise roughly 10 percent of the citizens in South Carolina. These individuals are more likely than the insured to have chronic health conditions including hypertension, diabetes, and respiratory diseases. They appear to have poorer outcomes as a result of misallocation of health care resources from prevention to acute intervention. CIC is a novel program which represents an effort to coordinate the efficient utilization of existing resources to meet the non-emergent health care needs of the medically uninsured. The CIC program has enjoyed a successful beginning and, with the continued strong support of providers and sponsors, looks forward to exciting progress in the future. ❐

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THE ANNUAL MEETING OF THE AMA
CHICAGO, ILLINOIS
JUNE 14-18, 1998

REPORT OF THE SCMA DELEGATION

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The Annual Meeting of the American Medical Association (AMA) was held in Chicago June 14-18, 1998. In attendance was the South Carolina Medical Association (SCMA) AMA Delegation. Also attending the meeting were Dr. Duren Johnson, Chairman, SCMA Board of Trustees; Bill Mahon, Chief Executive Officer; and Steve Williams, Senior Vice President and General Counsel.

There are also several specialty society AMA delegates who reside in South Carolina who have added greatly to the ability of the South Carolina delegation to function effectively on SCMA's behalf. I have mentioned them in the past, and once more I want to indicate our appreciation of their participation with the South Carolina delegation. Dr. David Osguthorpe, who is a professor at the Medical University of South Carolina, represents the American Association of Otolaryngic Allergists and has been recently appointed to the Residency Review Committee, a very prestigious appointment. We congratulate David on his appointment.

Of paramount importance during the AMA meeting was the election of two other South Carolina physicians to prominent offices. Dr. Randolph Smoak was reelected to the AMA Board of Trustees and was elected by that board to serve as chairman. To have Randy as chairman of the Board of Trustees of AMA is truly an epochal event. At the end of the meeting, Randy announced his candidacy for president-elect of AMA for next year. We salute Randy for his dedication to organized medicine. All South Carolina physicians should feel proud that we will potentially have one of our own occupying the presidency of the largest and most influential medical organizations in the world in year 2000.

In addition to Randy's election, Dr. Chris Hawk was elected to a seat on the prestigious Council on Scientific Affairs. This important council initiates and reviews some of the most important scientific efforts in the medical world. Chris will be a valuable member of that council, taking with him a background of excellent training, plus the desirable posture of a practicing physician. We also congratulate Chris.

We now have Dr. Randy Smoak as chairman of the AMA Board of Trustees and candidate for president-elect of AMA, Dr. Chris Hawk on the Council on Scientific Affairs, Dr. Dan Brake on the Council on Legislation, Dr. David Osguthorpe on the Residency Review Committee, and I will become chairman of the Southeastern Delegation at the next AMA Annual Meeting. South Carolina is certainly well represented at the national level.

Prior to reviewing the proceedings of the AMA meeting, I must interject some observations about AMA membership. When I entered medical practice in the mid-1960s, 80 percent of American physicians belonged to the AMA. At present, that figure has fallen to around 40 percent. If medical students and house officers are not counted, only about 32 percent of "practicing physicians" are members of AMA. This regrettable statistic is true at a time when perhaps more than any other time in the history of the medical profession in our country, enthusiastic, active members are needed. There are many reasons cited for the steady decline in membership: involvement in specialty societies, movement in the physician population to large medical group practices, decreasing physician income related to poorer reimbursement by payors, and steady changes in the demographic makeup of the physician population. All of these factors have influenced the decision on part of physicians to join and participate in AMA and in other "organized medicine" endeavors. These reasons are largely true, but must be weighed against the positive benefits which membership in AMA offers.

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One reason I often hear about why physicians are not members of AMA, which I do not accept, is that the AMA "does not represent me." To those who espouse this view, please try to reassess objectively and honestly your statement. Of all the organizations which are established to allow us to practice medicine properly, carefully, and knowledgeably for our patients and productively for ourselves, I am persuaded the AMA is the most important. In every arena of medicine, whether scientific, educational, ethical, political, or any other professional issues involved, the AMA is the greatest advocate. If you are a member, continue sustaining our noble organization; increase your commitment and dedication. If you are not a member, examine the advantages of membership, including the collegiality and the pleasure you will take in advancing the motives of good patient care, good education of generations of physicians to come, proper approach to ethical considerations, and aid in the successes of a productive medical practice. These are, after all, the objectives of the AMA.

In regards to the AMA Annual Meeting, there were many items of business presented to the House of Delegates. Reports from the Board of Trustees and from the various councils numbered 115, and 320 resolutions were considered and acted upon in Reference Committees and House of Delegates sessions. Many of these reports represented reaffirmation of already existing AMA policy, and many of the resolutions were duplicatory. Still, each report and resolution was discussed, debated, and either accepted, rejected, or referred for further action.

I will touch upon the most important items. Please read the issues of *AM News* for the weeks following the meeting for further detail and discussion of these and other actions of the House of Delegates.

- **"The Sunbeam Affair."** I am sure I do not have to go into much detail about this unhappy affair, which began with an effort on the part of the AMA staff to generate non-dues revenue and ended in AMA refusal, it appears, to honor a contract with Sunbeam. The contract would have allowed use of the AMA logo in marketing its products. A committee of members of the House of Delegates chaired by Dr. Mark Levine of Colorado submitted an excellent report summarizing the entire incident, laying the fault at the door of the AMA staff members who, in their enthusiasm for success of the contract, did not go through the proper channels in obtaining approval of the Board of Trustees. Though not everyone is satisfied with the explanations given, nor with the subsequent events, including the firing of some valuable AMA staff, the House of Delegates agreed to "closure," putting an end to this regrettable affair and vowing diligence to contractual arrangement and other business affairs of the AMA.

- **E&M Guidelines.** Given that the Sunbeam contract may have been an unhappy and somewhat divisive misadventure, the debate over the Medicare Evaluation and Management (E&M) Guidelines of 1997 was even more contentious. Beginning with resolutions that were presented at the Interim Meeting in Dallas in December of 1997, AMA has sought to work with the Health Care Financing Administration (HCFA) to develop a set of guidelines upon which office visits for evaluation and/or management of a patient can establish an appropriate charge. This thrust on the part of HCFA has sprung from the Health Insurance Protection and Portability Act (HIPPA), perhaps better known as the Kennedy-Kassabaum Act, which alleges great fraud and abuse in the Medicare payment system. At the Reference Committee in Dallas, which I chaired, there was great indignation at and flagellation of HCFA for devising such heinous and unworkable guidelines. Indeed, many were blaming AMA for sharing in the development of these guidelines. Largely ignored was the fact that each of the national specialty organizations was involved (or was supposed to have been involved) in structure of the guidelines. More important, the AMA really cannot tell the federal government how to run itself. Following the Dallas meeting, AMA held a "fly-in" in Chicago, which I attended. At that meeting, HCFA announced a stay in implementation of the guidelines until at least mid-1999 or longer. HCFA also stated that the government would work with AMA, the specialty societies, and the Current Procedural Terminology (CPT) Editorial Panel in devising more acceptable guidelines.

At the current meeting, there were 18 resolutions and one Board of Trustees report about the issue. After lengthy debate, a substitute resolution was passed which divided the decision into three complex parts: 1) that the AMA continue to oppose inappropriate penalties for alleged fraud and abuse; 2) that there be safeguards of the confidentiality of the medical record and discontinuation of random prepayment audits of E&M Code services, using instead focused review of "outliers" utilizing peer review processes by physicians of the same specialty; and 3) that AMA continue its efforts to work toward development of reasonable and acceptable documentation guidelines.

To truly assess all of the ramifications of the AMA decisions, please refer to the entire report from the House of Delegates that can be accessed from the AMA's website at www.ama-assn.org.

- **Individually Selected, Purchased, and Owned Health Expense Coverage.** For many years, there has been an ongoing study of the advantages and disadvantages of individually owned versus employer-provided health insurance. A report from the AMA Council of Medical Services addressed this issue and was largely accepted as a new direction toward support of the former, so long as employer-provided coverage was still available "to the extent the market demands it." Heretofore, the AMA had largely endorsed the premise that employer-provided health insurance was the best road to travel. Equally complex was the question of the thrust toward obtaining changes in the tax codes to allow deductibility of the premiums for individually purchased insurance. A "transition period" to allow employers to shift to the "patient-driven system" was advocated.

- **Patient Privacy and Confidentiality.** The Board of Trustees presented to the House of Delegates a comprehensive compilation of AMA policy, opinion, and activities regarding this issue. Many questions surrounding the privacy of the medical record, its availability to lawyers and courts, its use in such settings as genetic disease or acquired disease injury, and its availability to employers and other parties were discussed. The document was of immense importance and was accepted by the House of Delegates with only minor modifications.

- **Sale of Health-Related Non-Prescription Goods from Physicians' Offices.** The Council on Ethical and Judicial Affairs (CEJA) has once more rendered its opinion that the practice of selling such things as dietary supplements, magazines, vitamins, and even promoting "pyramid" selling programs is not ethically acceptable. Unfortunately, I understand some of this is going on in South Carolina.

I have touched on only a miniscule portion of the business of the House of Delegates. Many, many more important issues were presented, discussed, and acted upon. I assure you that your SCMA AMA delegation was an active part of those debates. Please feel free to discuss any and all of these topics with any member of the delegation.❒

SCMA AMA DELEGATION

Walter J. Roberts, Jr., M.D., Chairman
Daniel W. Brake, M.D., Delegate
J. Chris Hawk, III, M.D., Delegate
Roger A. Gaddy, M.D., Delegate
Stephen A. Imbeau, M.D., Alternate
Carol S. Nichols, M.D., Alternate
John W. Simmons, M.D., Alternate
S. Nelson Weston, M.D., Alternate

Editorials

ONLY THE GOOD

Not many years ago, at a medical staff meeting, a young physician was called upon to give his committee report. He stepped up, scanned the crowd, made three points in less than a minute, and sat down. There was spontaneous applause, not because of what he said but rather how he said it—confidently, carefully, concisely. Here, I thought aloud, is a future leader of the medical profession.

On May 14, Greg Jowers disappeared while bass fishing on Lake Murray. The ripples from his favorite waters struck the community like a tidal wave. The autopsy would disclose hemorrhage over the base of the brain, explaining why the expert boatsman had drowned but not what caused it to happen. Like most Columbia physicians, I knew Greg quite pleasantly, though not intimately, through shared patients and interests. Some of the praise that follows came from *The State* newspaper, but most of it comes from what I heard over the following weeks after his death.

A former Sunday School teacher: "He was one of my favorite kids...He was always a gentleman, even as a young man. He was destined for greatness."

A surgeon: "What you saw was what you got. He was straightforward. There was nothing fake about him."

A surgeon: "He was like someone from the previous generation. He had all the right motives."

A partner: "He could see 60 to 80 patients a day, and all of them would be happy, feeling they'd gotten enough attention. Oh, he'd sometimes get ruffled like all of us but in general he was always calm."

A patient: "He's friendly and willing to talk, which a lot of those doctors are not willing to do."

R. Gregory Jowers, M.D., 1951—1998

His office staff (a composite): "He really cared. He never forgot anything...very dedicated...a wonderful man...He worked fast, but he spent a lot of time with his patients. He didn't stop for lunch most of the time...He was more than just a doctor to his patients. He was a friend."

A physician practicing in another town: "I know of him through his patients. His patients feel he is a very caring physician. I know his patients love him."

A partner: "Time after time, he'd get up and go in to see someone in the emergency room when I probably wouldn't have."

A nurse: "He was someone you just trusted. When he said something, you knew you could count on it."

An internist-subspecialist: "He knew exactly when to take care of a problem himself and when to refer [the patient]."

His pastor: "If you want to pick out one person and say this is where it all begins, he'd be the one. He's touched a lot of people a lot of ways."

A chaplain: "He knew how to make people laugh. There were so many people at the funeral service that I could barely hear, but I remember that people would laugh with some of the reminiscences despite the overwhelming sadness."

A physician's wife: "It's hard to separate the friend from the doctor. He is an enormously dedicated family man. The only four things I know he does are fishing, medicine, and church…He has a doctor trait that's always been my criteria. If you see him and he doesn't know what's the matter, he'll say, 'I don't know what's going on, but we'll find someone who does.'…I know a number of doctors who go to him. That's a telling kind of thing."

A fellow fisherman: "He's as fine a person as you'll ever be associated with professionally and as a sportsman."

The executive director of our county medical society: "He was wonderful. He organized our committee on Medicaid patients, and he himself saw so many people who had no insurance. He seemed to do things because he genuinely cared about people, not for his own personal aggrandizement."

The Greeks defined tragedy as a bad outcome traceable to a character flaw, evoking among the living a catharsis of pity and fear. In that sense, Greg's death would be tragic only to those cynical few who would find fault in one's passion for bass fishing. What is clear is that South Carolina medicine lost a potential leader, numerous patients lost a fine doctor, and a fortunate few lost a very fine friend.

—CSB

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B is for Ball,

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On the Cover:

WILLIAM ROBERT WALLACE, 1882-1976

In 1973, the headline for an interview with Dr. Wallace proclaimed him the state's oldest practicing doctor. His medical license number was 736. William Robert Wallace was born in Chester County in 1882. He was graduated from Presbyterian College with an A.B. degree in 1903. He was principal of Ellenton Schools from 1904-1905 before deciding to attend the Medical College of Virginia after seeing an advertisement for the school (tuition was about $200 a year). He graduated from the Medical College of Virginia in three years, receiving his degree in 1908. During the next year, he did post graduate work at Memorial Hospital in Richmond, Virginia and Roper Hospital in Charleston, South Carolina. In 1909, Dr. Wallace returned to Chester to practice in association with Dr. Harvey E. McConnell. Dr. Wallace recalled in the 1973 interview that he "entered practice in the horse and buggy days," but during his second year in Chester, "I bought a one-cylinder Reo, the only car around at the time, for $350. I think its top speed was 30 miles an hour. Generally, I drove 10 to 15...there were so many rough places in the roads...The only paved road was down to Great Falls." Dr. Wallace, Dr. McConnell, Dr. Abell, and several others organized the Chester Sanatorium. The same group also operated the Pryor Hospital for about 30 years before the Chester County Hospital was built in the 1950s. Dr. Wallace was married to Lucile Melton from Orangeburg in June 1915.

Dr. Wallace became a member of the Executive Committee of the State Board of Health in 1922 and in 1944 was elected chairman, in which capacity he served until 1967 when he resigned the chairmanship but remained on the committee until 1970. Dr. Wallace was honored at the opening of the J. Marion Sims Building by the naming of the assembly room the "W. R. Wallace Room." He remarked at this time that he had served with four health officers—Dr. Fred Williams, Dr. J. Adams Hayne, Dr. Ben Wyman, and Dr. G. S. T. Peeples—and had seen public health expenditure increase from $175,000 to more than $12 million a year.

In addition to Dr. Wallace's long service on the State Board of Health, he served on the Board of Trustees of Presbyterian College for over 50 years, as an elder in the Presbyterian Church since 1922, and as past president of the Rotary Club of Chester, the Tri-State Medical Association, and the Chester County Medical Society. He was also a member of the Seaboard Airline Railway Surgeons Association. Dr. Wallace was president of the South Carolina Medical Association in 1944. He recalled, "For 50 successive years I went to the conventions, and I bet there isn't another man in South Carolina who did that."

In his leisure time, his interests centered around Chester County History, medical history, and gardening. He also enjoyed an avocation as a minstrel. A group of Rotarians calling themselves "The Rotary Minstrels" provided a popular show which went all the way to Madison Square Garden. The town of Chester honored Dr. Wallace with the observation of a "Will Wallace Day" in the 1960s. He died on May 16, 1976.

Twenty five years ago, in 1973, after 64 years as a practicing physician, Dr. Wallace, at the age of 91, summed up his years of medical practice: "The image of the doctor has changed markedly in the past sixty years, and it has been a wonderful period in which to live. In 1909, I could carry almost all my equipment in saddle bags thrown across the back of my faithful steed. Today, I could scarcely pack it into a pickup truck, so home visits have changed to office and hospital consultations.

"With the advent of the telephone, good roads, and the automobile, the doctor of today can minister to ten or more patients to the one treated by his forerunners."[1]

Jane McCutchen Brown, Curator
Waring Historical Library

REFERENCES

1. Quotes taken from an interview of Dr. Wallace which was published in The Charleston Evening Post August 4, 1973, p. 8-A and in Update (The Magazine of the South Carolina State Board of Health) Vol. 3 No. 3, Summer, 1973, pp. 12-14.

Alliance Page

MEDICAL SOCIETY & ALLIANCE JOINT MEETING

For 75 years, the alliance has worked closely with the medical societies. Since it's inception, the purpose of the alliance has been a charitable one. We raise money for medical education, we work to promote medical understanding and good will, and we educate the community on a county, state, and national level.

Today, violence continues to be one of the most disturbing health issues in our communities. Violence no longer occurs only in major cities; it is now seen in small and large towns across our country. This violence is so senseless. It leaves us numb and at a loss as to what we can do. There are no clear answers, and the problem is so broad and pervasive that it seems as if it is impossible to know where to start.

This year, the state and county alliances in South Carolina are focusing on domestic violence. Statistics demonstrate that violent behavior seen in the home has a major impact on the future violent behavior of the children. We have decided this year, not only to focus our state project on domestic violence, but also to provide information for our spouses on the problem and what they can do.

The alliance is compiling a list of speakers for a speakers' bureau, which we hope each county medical society and alliance will utilize. The speakers will focus on domestic violence: identification, legal questions, and help for individual victims. Eighty percent of the domestic violence victims polled stated they would have told their doctors that they were abused if they had been asked. However, suspicion and questioning a patient are two different problems. The alliance feels strongly that our physicians need to have as much information as possible before they feel comfortable inquiring about suspected violence.

Each one of us has to realize that we can make a difference. Think of yourself as a pebble. When tossed into a pond, the ripples spread across the pond, affecting everything it touches. Once tossed, that pebble forever changes the pond into which it was dropped. Things we do affect others in ways we may never realize.

It is our hope that each county medical society and alliance will meet together this year with a speaker who addresses violence. Please take advantage of the opportunity and encourage your spouse to join you. If we can affect one life, help one person avoid continued abuse, and prevent one child from becoming desensitized to violence, we will have made a considerable impact and difference in our community and the future of our country. As my theme for the year states: **HAPPINESS IS CARING, SHARING, AND DARING TO CHANGE**. By being informed, you can feel more confident that your caring will result in positive changes.

M. Alexis Alia (Mrs. Richard T.)
President, SCMAA 1998-1999

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45	M	$1,595	$1,245	F	$1,215	$985
50	M	$2,315	$1,695	F	$1,665	$1,275
55	M	$3,405	$2,505	F	$2,245	$1,805
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65	M	$8,965	$6,965	F	$4,985	$4,065

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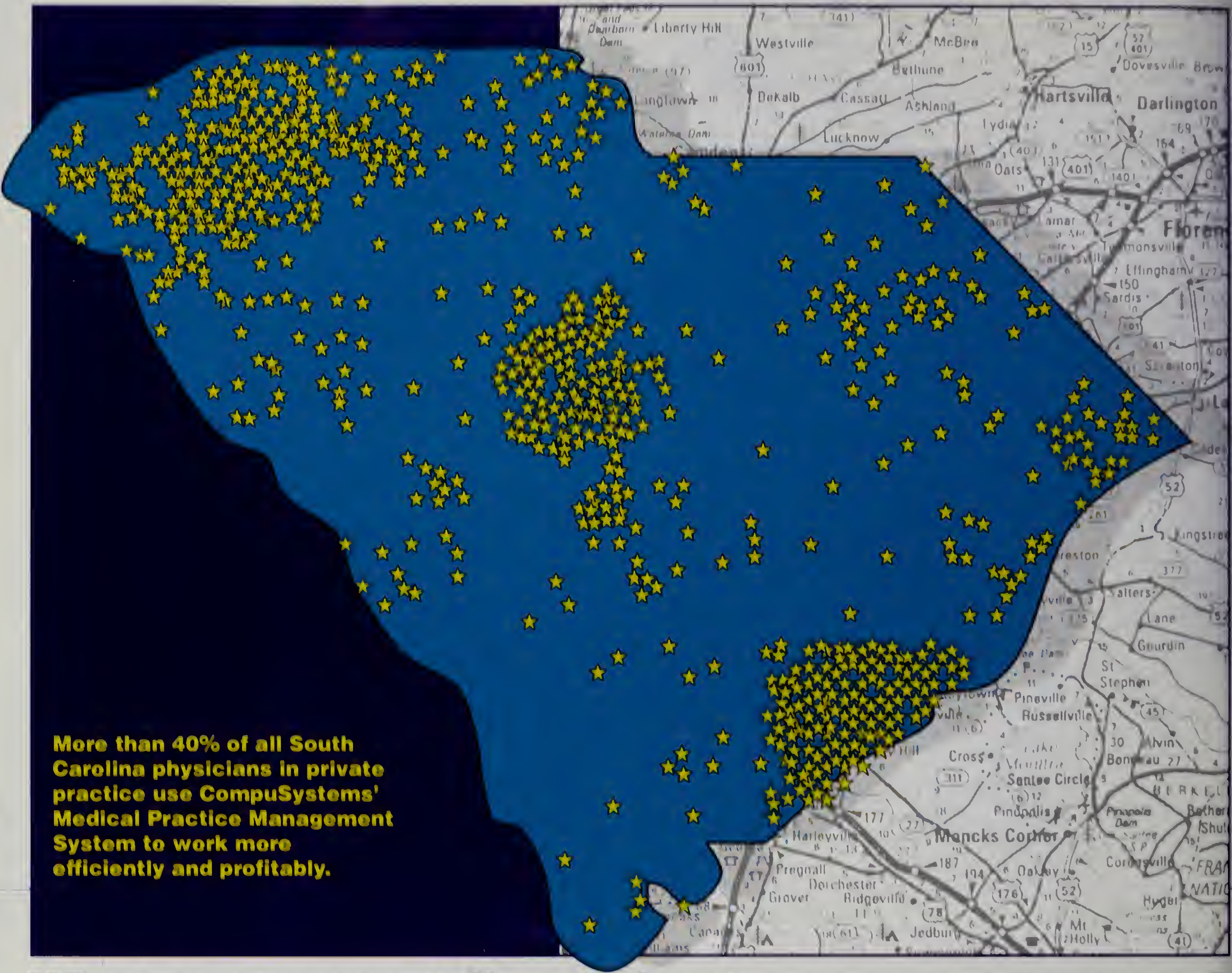

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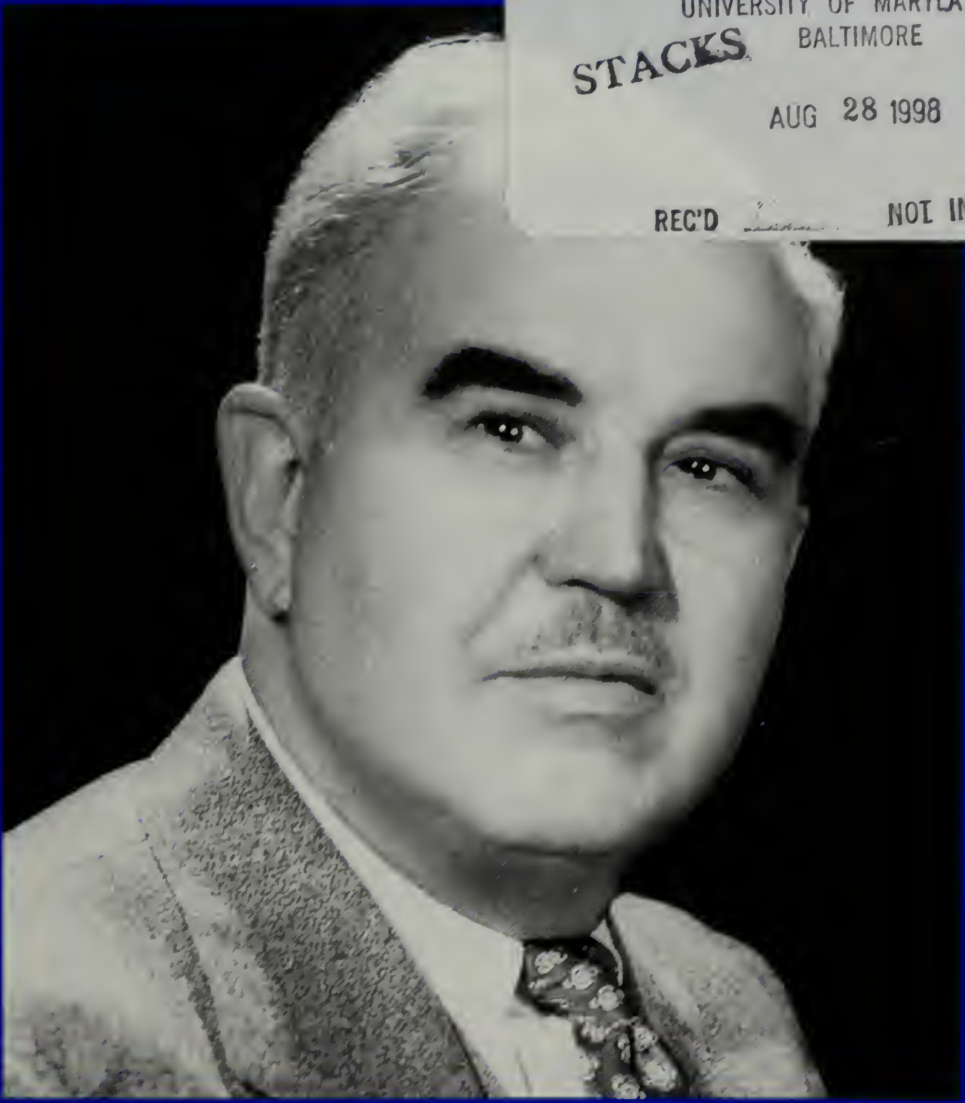

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1998 LEGISLATIVE SUMMARY

This is a wrap-up of the 1998 session of the South Carolina General Assembly. This marks the end of the two year, 112th session of the Legislature. All bills that did not pass this year will have to be introduced again next session.

For the South Carolina Medical Association (SCMA), this was one of the busiest sessions ever. On the very last day of session, the Patients' Insurance and Benefits Act and the Omnibus Health Bill passed. Other bills that the SCMA supported that passed are the Privacy of Genetic Testing, Ban on Physician Assisted Suicide, Assistive Technology Warranty Act, Elimination of Kidney Treatment Centers from Certificate of Need (CON), the (Prudent Layperson) Emergency Services Act, and Organ Donation. If you would like a copies of these bills, you can call the SCMA at (800) 327-1021, extension 235 and request that copies be mailed to you.

The HIV Testing of Newborns Bill that the SCMA drafted and had introduced did not pass because of an objection put on the bill during the last days of the session. This bill made it through the House and then through the Senate Medical Affairs Committee and onto the Senate Calendar for 3rd reading. Senator Mike Fair placed an objection on the bill, then Senator Holly Cork added her name. These objections prevented passage of the bill. It will be introduced next year, and we will work to have it passed early in the session.

After approximately 15 years of opposing the Physical Therapy (PT) Independent Practice Bill, the SCMA took a neutral position on the bill if certain amendments were adopted. The bill passed with a mandatory referral of a patient to a medical doctor if the PT wants to continue to treat the patient after 30 days if the patient was not referred to the PT by a medical doctor for the initial treatment. Also, there is no mandatory insurance reimbursement if a patient seeks treatment of a PT without a prescription from a medical doctor. The PT may not alter a physician's orders for PT without consent.

One bill that the SCMA helped defeat was the Incident and Occurrence Report Bill sponsored by Greenville Representative, Fletcher Smith. This bill would require that incident and occurrence reports related to diagnosis, care, and treatment must be included in the patient's medical record. This may impact risk management and peer review activities in facilities. This bill probably will be reintroduced next year. Listed below are summaries of some of the major legislation that passed.

SC PATIENTS' INSURANCE & BENEFITS PROTECTION ACT (S. 310)

This legislation requires an employer who employs at least 50 eligible employees and **only** offers a closed health plan (for major medical, hospitalization, and surgical health insurance coverage) to **also** offer eligible employees a "point-of-service" option to those employees who wish to purchase an open plan with their own money. A closed panel health plan is a network plan which requires insured members to seek covered health care services or supplies exclusively from network providers (except in emergency cases). In contrast, a "point-of-service" option provides coverage under which insured members may obtain covered health care service/supplies from either network providers or from providers outside the network. Under the legislation, the employer may require an employee who chooses the "point-of-service" option to pay for any difference in premiums or other payments in excess of the benefits provided under the closed panel plan. The act provides that differences between the coinsurance percentages for in-network and out-of-network covered benefits in a "point-of-service" option plan may not exceed 20 percent or five percent in the case of services provided by dentists.

The act also bans hold harmless and indemnification clauses, as well as gag clauses and requires insurance companies to give more information about covered and non-covered services and enrollment.

BAN ON PHYSICIAN ASSISTED SUICIDE (S. 758)

This legislation makes it a felony to assist another person in attempting to or committing suicide. The provisions do not apply to a licensed health professional when providing medications to relieve pain unless administered to cause death or when a health professional withholds or withdraws life-sustaining procedures. Licensed health professionals may lose their licenses and go to jail if convicted under this act.

PATIENT ACCESS TO DERMATOLOGISTS (S. 124)

This compromise legislation allows a patient referred by a primary care physician to an in-network dermatologist to continue to see the dermatologist for a minimum of six months or four visits, whichever comes first, without further referral. The continuing visits must be for diagnosis, treatment or procedures related to the initial referral. The dermatologist must provide written reports to the primary care physician after each visit.

SC CENTRAL CANCER REGISTRY REGULATIONS (H. 4648)

This regulation from the Department of Health and Environmental Control (DHEC) implemented the SC Central Cancer Registry Act which passed the General Assembly in 1996. These regulations provide requirements for reporting cancer cases, define the data elements to be collected and the content of the reports, and establish procedures for the disclosure of confidential registry information. DHEC worked with the SCMA and the South Carolina Health Alliance (SCHA) to improve the legislation before it passed, and these proposed regulations continue to make this reporting process easier. These regulations require DHEC to collect information from existing registries and to provide medical record abstractors to hospitals which do not participate in regional registries. It also requires reporting from all health care providers, including independent path labs, freestanding surgery centers, and doctors' offices. Reporting providers should not incur additional expense to submit the required data.

PHARMACY PRACTICE ACT (S.130)

This legislation includes major and comprehensive changes in the Pharmacy Practice Act.

OMNIBUS HEALTH INSURANCE BENEFITS ACT (H. 3985)

This legislation requires a health benefit plan to allow its female enrollees (at least 13 years of age) a minimum of two visits each year, without prior approval, to an OB/GYN in the health benefit plan. Should the OB/GYN find during these two visits that continued treatment is medically necessary, additional visits must be authorized by the health benefit plan. The health benefit plan must notify enrollees of these benefits.

The act also requires that all health insurers that provide coverage for mastectomies must provide coverage for hospitalization for at least 48 hours following the mastectomy. The health insurers must also cover prosthetic devices and restorative surgery so as to produce a symmetrical appearance. Additionally, the act requires all health insurers to provide coverage for mammograms, annual pap smears, and prostate cancer examinations.

PRIVACY OF GENETIC INFORMATION (S. 535)

This legislation provides for privacy of genetic information with regard to insurance coverage. The legislation aims to encourage individuals to obtain potentially life-saving information from genetic tests without fear of an adverse impact on their insurance rates. To that end, this act prohibits insurers from denying or restricting coverage on an individual on the basis of information obtained in genetic tests. An accident or health insurer may not require a person to consent to disclosure of genetic information as a condition for obtaining accident and health insurance. Neither may an insurer charge rates which vary on the basis of information obtained from genetic tests.

ACCESS TO EMERGENCY MEDICAL CARE ACT (H. 3889)

This bill requires medical personnel to initiate appropriate intervention to stabilize any emergency medical condition before requesting authorization for the treatment from a managed care organization. If, following emergency medical treatment, it is later determined that the insured patient's condition was not an actual emergency situation, the act prohibits a managed care organization from denying or reducing payments to medical care providers. A managed care organization would be able to deny or reduce payments in case of fraud or other specific situations.

The act also requires a managed care organization to inform its insureds, enrollees, patients, and affiliated providers about all policies related to emergency medical care access, coverage, payments, and grievance procedures. Under this legislation, no managed care organization may engage in any practice which prohibits or discourages the appropriate use of the 911 emergency telephone system.

CON (S. 963)

This legislation removes hemodialysis and kidney disease treatment centers from CON.

President's Page

THE SOUTH CAROLINA MEDICAL ASSOCIATION: AN ORGANIZATION IN TRANSITION

Over the last 20 years, the South Carolina Medical Association (SCMA) has enjoyed positive change and explosive growth.

We have grown from 1,800 members to 5,300 (55 percent of all physicians in the state to over 70 percent). We have also experienced growth among staff and subsidiaries. We have grown from one vice president to five and one subsidiary to six. We now have a fully functioning health insurance operation, a licensed general insurance agency, and a practice management division. Along the way, we have streamlined our lobbying and volunteer committee structures. All this growth has put pressure on our space and management organization.

Therefore, the SCMA began a long range planning process in September of 1997 in cooperation with a well-recognized consultant. A five-year plan was adopted by the Board of Trustees in March (a copy of the long range plan is available upon request). Several key points comprise the plan: 1) preserve and strengthen the "traditional" SCMA, recognizing changes in medical practice and in physician demographics, needs, and expectations; 2) keep the new for-profit activities within the SCMA umbrella and encourage their orderly growth; and 3) reorganize the SCMA into a central services department managed by a chief operations officer (COO) with equally weighted, but inter-independent operations departments/divisions (i.e., member services, governmental relations, SCMA Financial Services, Inc., Physicians Care Network, SCMA Practice Management Services, Inc., etc., noting names of departments may change along the way). Vice presidents with equal clout and authority under the COO will manage each of these operations departments. Everyone will report to the chief executive officer (CEO).

Each of the operations departments/divisions will have a physician board, and we envision all of the division physician presidents and their staff meeting with the SCMA Board of Trustees at our annual retreat or at a special meeting at least once a year.

Stay tuned.

Stephen A. Imbeau, M.D.
President

The Journal™ OF THE SOUTH CAROLINA MEDICAL ASSOCIATION

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150 Years
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SCMA NEWSLETTER

A PUBLICATION OF THE SOUTH CAROLINA MEDICAL ASSOCIATION

Audria Belton Benn, Editor
(803) 798-6207, in Columbia • (800) 327-1021, statewide
Visit our website: www.scmanet.org

August 1998

HIGHLIGHTS OF THE JULY 15th BOARD OF TRUSTEES MEETING

Prompt Payment Legislation: The board directed staff to draft legislation to address slow reimbursement from third party payors.

Managed Care Advocacy: The board decided to refer the American Medical Association (AMA) Managed Care Advocacy Campaign to the South Carolina Medical Association (SCMA) Managed Care Committee to study how the SCMA can participate in the AMA's efforts. ❒

MEDICARE UPDATE

EMC Toll-free Telephone Service to End: Effective October 1, 1998, as a cost savings measure, Palmetto Government Benefits Administrators (PGBA) can no longer provide toll-free telephone service to you for the submission of EMC claims. As your Medicare carrier, it is extremely important for them to assist you during this transition in order to avoid any interruption in your submission of electronic claims. It is PGBA's goal to help you obtain quality, affordable long distance service. While the decision on which company to select is yours, there are a variety of charge features from which to choose. Please be aware that PGBA cannot pay any long distance service to deliver your electronic claims to them. As your Medicare carrier, they want to remind you that at this time they cannot accept electronic claims that are sent to them via the Internet, as this would risk the privacy of Medicare beneficiary data. However, the Health Care Financing Administration is exploring the Internet option.

PGBA's Electronic Data Interchange (EDI) will contact all affected electronic submitters and Claims Status Inquiry users between August 1 and September 30, 1998, to help them make the changes needed to discontinue using the toll-free lines. They will notify all Medicare Part B and Durable Medical Equipment certified software vendors.

Please do not contact the EDI help desk of the service centers regarding the transition from toll-free lines unless PGBA EDI has not contacted you by September 15, 1998. They will be making every effort to ensure that transitional issues are addressed in a proactive and orderly manner, with the least possible impact to EDI help desk service levels. Your assistance in the transition is appreciated. ❒

CAPSULES

J. David Osguthorpe, MD, of Charleston has been appointed delegate of the American Academy of Otolaryngology, Head and Neck Surgery to the AMA House of Delegates.

RISK MANAGEMENT PROGRAM FOR NEW PHYSICIANS

The next Risk Management Program for newly licensed physicians will be held at the SCMA Headquarters on Friday, October 16, 1998. There will be two sessions offered, 9:00 a.m. - 12:00 p.m. and 1:00 p.m. - 4:00 p.m. To register, call Cindy Osborn at (800) 327-1021, extension 257. This program is sponsored by the Joint Underwriting Association (JUA)/SCMA Physician Risk Management Committee for physicians entering their first or second year of practice. Attendance at the program will enable new physicians in their first year of practice to obtain a 50 percent reduction in their JUA/Patients Compensation Fund (PCF) professional liability premium and a 25 percent reduction for the second year. There is no registration fee.

OBJECTIVES OF PROGRAM

At the end of this session, the attendee should be able to:

- Name the more common causes of medical malpractice.
- List several prevention strategies to avoid medical malpractice.
- Recognize the role of communication with patients in risk management.
- Outline the key points in record management as a role of risk management.
- Enumerate the proper steps to take when an adverse occurrence happens.
- Recognize the role of the JUA/PCF and the State Board of Medical Examiners in risk management.

PROGRAM OUTLINE

I. Introduction - March Seabrook, MD (West Columbia, SC)

II. Overview of JUA and PCF - Sam McEwen, Manager, JUA Claims (Columbia, SC)

III. Controlling Medical Liability - March Seabrook, MD

IV. If You Need A Lawyer - Ashby W. Davis, JD (Greenville, SC), Steven A. Snyder, JD (Greenville, SC)

V. Overview of the State Board of Medical Examiners - J. D. Whitehead, Jr., MD, State Board of Medical Examiners (Columbia, SC)

VI. Hospital Risk Management - Karl Pfaehler, SC Hospital Association (Columbia, SC)

VII. Question and Answer Session

CME CREDIT

The South Carolina Medical Association (SCMA) designates this continuing medical education activity for up to 3 hours of Category 1 credit toward the Physician's Recognition Award for the American Medical Association. Each physician should claim only those hours of credit he or she actually spent in the educational activity.

The South Carolina Medical Association is accredited by the Accreditation Council for Continuing Medical Education (ACCME) to sponsor continuing medical education for physicians.

MARK YOUR CALENDAR

The SCMA's Annual Meeting and Scientific Assembly is scheduled for April 29-May 2, 1999, at Charleston Place Hotel, Charleston, South Carolina.

SCMA WORKSHOPS

OSHA COMPLIANCE FOR MEDICAL PRACTICES
SEPTEMBER 2, 1998

Most medical compliance officers worry about complicated and changing regulations put forth by the Occupational Safety and Health Administration (OSHA). With the emphasis on patient care and subsequent reduced time for other responsibilities, how do you keep the employees working safely and the practice ready for an OSHA inspection? This workshop will take you through all state and federal OSHA regulations and bring you up-to-date on what you need to know to provide a safe work environment for medical offices. **Register by August 24, 1998.**

9:00 a.m. - 12:00 p.m.; Registration: 8:30 a.m.
Columbia, Clarion Town House Hotel

UNDERSTANDING PRACTICE EXPENSES AND DETERMINING THE COST OF SERVICES
SEPTEMBER 16, 1998

Most medical practices have no idea what it costs to "open the doors" each day, much less the cost of any specific service they provide. This seminar will address the importance of prudent overhead management and the reduction of expenses, as well as provide techniques and tools to help practice and physician managers determine the cost of providing services. As the emphasis on your practice revenues shifts from the traditional fee-for-service indemnity plans to discounted plans, global payments, and other "creative" reimbursement formulas, your management emphasis must begin to focus on understanding your total practice costs and being able to determine the cost of providing your services. **Register by September 8, 1998.**

9:00 a.m. - 4:00 p.m.; Registration: 8:30 a.m.
Columbia, Adam's Mark Hotel

(continued on page 4)

PHYSICIANS CARE NETWORK UPDATE

Physicians Care Network (PCN) now has 6,285 participating physicians, 649 participating ancillary providers, and 83 participating hospitals. PCN currently has 73 contracted groups and eight groups pending for contracts with 55,640 covered lives. We will provide more information as contracts are received.

The following groups have terminated with PCN: Augusta Fiberglass, 6/1/98; Bailey Financial, 6/1/98; Builders Supply, 5/1/98; Creative Apparel, 6/1/98; Fennell Container, 8/1/98; Fogles, Inc., 6/1/98; Guess Farm Equipment, 6/1/98; Material Supply, 5/1/98; Orian Rugs, 9/1/98.

Don't forget to notify PCN when you have a tax ID number change, address change or when you add a new physician to your group. Early notification will ensure provider directory accuracy and prevent claims payment delays.

If you have questions about PCN, please contact Cindy Osborn, Network Coordinator, PCN, at 798-6207, extension 257 in Columbia or statewide at (800) 327-1021. You may also send an e-mail message to cindy@scmanet.org.

MEDICAID UPDATE

Physicians' Options Under South Carolina Medicaid: Physicians now have several options for reimbursement from South Carolina Medicaid: Fee-for-Service, Health Maintenance Organizations (HMO), Physician Enhanced Program (PEP), and Healthy Options Program (HOP). If you have any questions regarding your reimbursement, please contact your program manager at (803) 253-6134.

EPSDT: Are you a participating Medicaid provider for the Early and Periodic Screening, Diagnosis, and Treatment (EPSDT) Program? The South Carolina Department of Health and Human Services (DHHS) and the SCMA are interested in your opinions, questions, or concerns regarding this program. Please contact Kelly Danias, SCMA, in Columbia at 798-6207, extension 236 or statewide at (800) 327-1021. You may also call Alicia Jacobs, DHHS, at (803) 253-6134 to comment. We encourage and appreciate your participation in this program review. ❐

SOUTH CAROLINA SPINE SOCIETY CALL FOR ABSTRACTS

The South Carolina Spine Society Meeting will be held on October 17, 1998, at the Charleston Place Hotel in Charleston, South Carolina. The meeting is an annual issues and information symposium for physicians in the following fields: spine surgery, orthopaedics, psychiatry, neurosurgery, physical medicine and rehabilitation, and anesthesiology.

If you would like to participate or present an abstract at the meeting, please contact Dr. Bill Edwards or Vicky Turner at (843) 662-5233. You may also mail or fax your response to: South Carolina Spine Society, 901 E. Cheves Street, Suite 100, Florence, SC 29506. The fax number is (843) 678-9003. **Deadline for abstracts is September 20, 1998.**

TOWARD THE MILLENNIUM: THE FUTURE OF SICKLE CELL DISEASE IN SOUTH CAROLINA

This conference will be held September 18-19 at the Charleston Place Hotel and Convention Center in Charleston, South Carolina. The keynote speaker is Dr. Clarice Reid, Director of Blood Diseases and Resources for the National Heart, Lung, and Blood Institute. The conference is intended to provide an overview of sickle cell disease, including current treatments as well as those on the horizon, to all health professionals who provide care to patients with sickle cell disease. The conference will also feature community based educators and workers who will share their expertise on education and support for families and patients. In addition to the conference, there will be a Community Day held on Saturday, September 19 at the King Street Palace. Education about sickle cell disease, as well as screenings and other health related information will be held in a fun and festive atmosphere.

For information about registration, please call (800) 651-2926.

WORKSHOPS (continued)

COMPUTERIZED PATIENT RECORDS
SEPTEMBER 30, 1998

Computerized patient records (CPR) is the current topic of discussion in medical offices around the state. This workshop will help you separate the reality from the rhetoric with an objective, nitty-gritty evaluation of CPR systems. Emphasis will be on the practical questions that medical practices must consider when they think about CPR. **Register by September 21, 1998.**

9:00 a.m. - 12:00 p.m.; Registration: 8:30 a.m.
or
1:00 p.m. - 4:00 p.m.; Registration: 12:30 p.m.
Columbia, Clarion Town House Hotel

Space in each program is limited, so be sure to register early. If you have any questions, please contact Melissa Hamby, extension 253, at 798-6207 in Columbia, or at (800) 327-1021 statewide, or by e-mail at melissa@scmanet.org. ❒

www.lifewell.com

A group of physicians in South Carolina have launched a national website, *Lifewell*, as an online starting point for quality health care information. *Lifewell* brings together links and information that are physician approved with lots of opportunities for user interaction. Built as an online community, *Lifewell* invites visitors to register for free membership, then participate in chats and forums. Members are encouraged to form their own on-line support groups, ask medical experts for answers, and post any personal experience or medical information they want to share. *Lifewell* also offers a comprehensive database of general health and fitness information grouped into InfoSprings with topics ranging from common complaints to chronic illnesses. ❒

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VOLUME 94 AUGUST 1998 NUMBER 8

LAPAROSCOPIC INGUINAL HERNIA REPAIRS IN MEN IN A COMMUNITY HOSPITAL SETTING USING THE TAPP APPROACH

DAVID A. PARDIECK, M. D., F. A. C. S.*

Surgeons are continually in search of innovative techniques to give their patients the quickest possible recovery with the lowest amount of pain and disability. Few operative procedures have, in recent memory, aroused as much controversy as the laparoscopic repair of inguinal hernias.

Laparoscopic hernia repairs were first introduced in the early 1980s. As with any new operative approach, medical professionals were at first resistant to changing their time-honored techniques. Also, novices practicing any new procedure without proper training will frequently cause an increase in morbidity and mortality and give the new operation a bad reputation.[1]

In 1982, Ger performed the first laparoscopic hernia repair with placement of a small piece of mesh at the internal inguinal ring. Many other types of laparoscopic repairs then followed, leading up to the trans-abdominal pre-peritoneal (TAPP) Stoppa type of hernia repair with a tension-free onlay of mesh. Of the estimated 750,000 inguinal hernia repairs to be performed in 1998 in the United States, 75 percent will be completed in one of the following techniques: the "tension-free" manner using prosthetic mesh, including the plug; the Lichtenstein repair; and the laparoscopic repair. Sutured repairs such as the Shouldice, McVey, and Bassini have become old-fashioned and represent a minority of herniorraphies.[2] I am reporting a series of male patients who underwent the TAPP laparoscopic inguinal hernia repair by one surgeon in a small community hospital setting involving two outpatient surgery centers.

MATERIALS AND METHODS

Absolute contraindications for laparoscopic hernia repairs include contraindications for general anesthesia, previous radical prostate surgery including radiation, or previous major abdominal catastrophes such as perforated diverticulitis of the colon. Patients who have undergone other previous abdominal surgeries are approached cautiously.

A total of 165 male patients was operated upon for repairs of 234 separate inguinal hernias from August 1994 to March 1998. Ages ranged from 17 to 88, with an average of 49.9

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*Address correspondence to Dr. Pardieck at Lowcountry Hernia Center, P.A., 9229-D University Boulevard, Charleston, SC 29406.

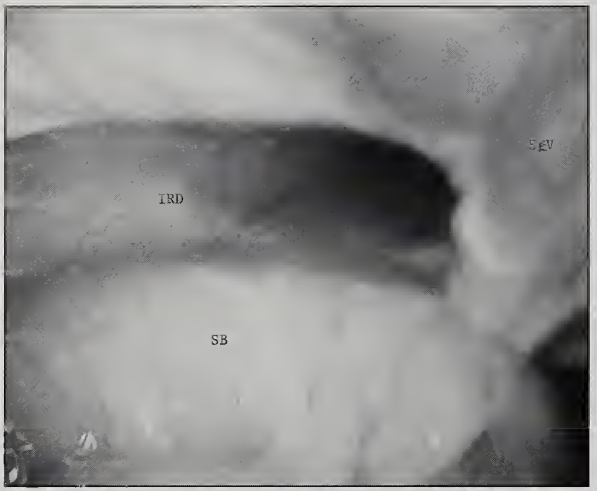

Figure 1. Left Inguinal hernia. IRD-Internal ring defect. S.B.-Small Bowel, SEV-Superior epigastric vessels.

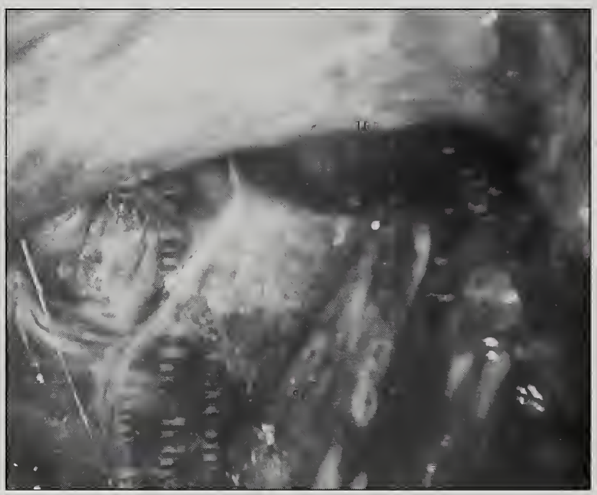

Figure 2. IRD-Internal ring defect. SC-Spermatic cord.

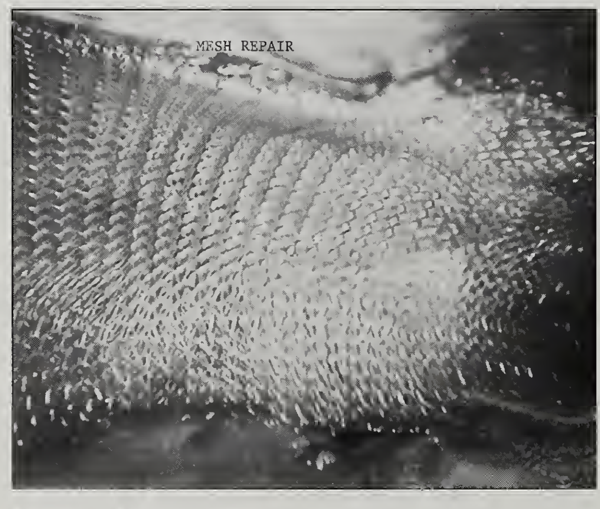

Figure 3. Mesh repair

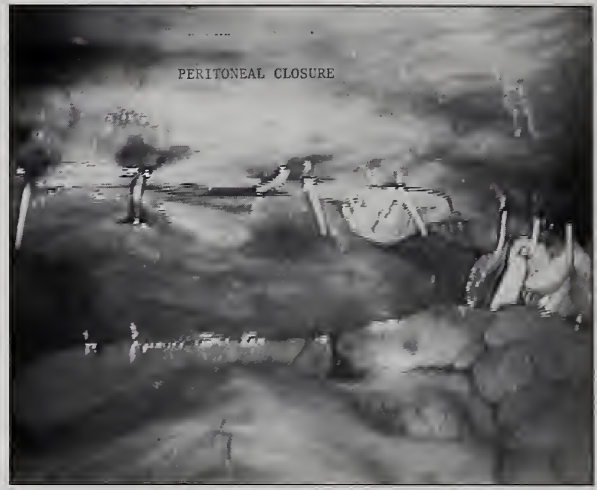

Figure 4. Peritoneal closure.

years. Of the hernias, 60 (26 percent) were on the right, 37 (16 percent) were on the left, and 67 (58 percent) were bilateral. Of these 121 (51 percent) were direct, 106 (45 percent) were indirect, three (one percent) were femoral, and seven (three percent) were pantoloon hernias. There were 35 (15 percent) recurrent hernias.

All surgeries were performed with general endotrachial tube anesthesia. The use of nasal gastric tubes and foley catheters was discontinued in 1995. The average operative time for a single hernia repair was 46 minutes (± 10 min.), and a bilateral inguinal hernia repair was 80 minutes (± 15 minutes). The surgical procedure is as follows.

A periumbilical incision is made using the Hasson visual technique with a blunt 10-mm, reusable trocar (eliminating the risk of the Verees needle). $C0_2$ is then insufflated with a preset maximum pressure of 13mm. After inserting a 10-mm zero angle scope, the entire abdomen is visually inspected. The patient is then put in a Trendelenberg position, and 5-mm and 12-mm reusable trocars are safely placed under direct vision in the right and left para-rectus spaces.

The repair is carried out by incising the peritoneum in the groin anteriorly from just medial to the anterior superior iliac spine over to the lateral border of the lateral umbilical ligament. Peritoneal flaps are developed generously to totally expose the anatomy of the groin and to allow the mesh to eventually lie flat. Any direct hernia defects are demarcated completely in the transversalis aponeuroses to allow at least a two to three cm overlap of the mesh. The pubic tubercle and Cooper's ligament are freed up from the mid-line over to the femoral vein. Any present femoral hernias are then dissected. A peritoneal flap is dissected off the spermatic cord, and any indirect hernia sacs are reduced whenever possible. Large scrotal hernia sacs are best left in place to prevent damage to the cord structures. Poster-laterally, a peritoneal pocket is completed over the ilial-psoas muscle with careful avoidance of the nerve structures. A piece of Prolene mesh, at least 13 x 15 cm large, is placed on the groin by stapling it (EMS Ethicon) to the pubic tubercle with overlap to Cooper's ligament transversalis aponeuroses, overlapping direct defects by two cm with only one or two staples anterior to the ilial pubic tract of the inguinal ligament. No staples are placed posterior to this area to prevent potential nerve injuries. The mesh is not split for the cord, and mesh placement must adequately cover the internal inguinal ring for indirect defects. A linear tight peritoneal closure is then done with either staples or sutures. The trocars and CO_2 are removed from the abdomen, the fascia at the umbilical port is sutured, and all three trocar sites are closed with subcuticular sutures. All incisions are blocked with .25 percent Marcaine for postoperative analgesia.

FOLLOW-UP

For purposes of follow-up, I have broken the study down into two groups of patients. Group one includes those operated upon from August 1994 to May 1997 (when I changed from a full general surgery practice to one limited exclusively to hernia surgery): 94 patients with 136 hernias and an 85 percent follow-up. Group two consists of patients from June 1997 to March 1998: 69 patients with 96 hernias and a 99 percent short term follow-up.

RESULTS

Of the total 165 patients, 41 underwent other surgical procedures at the time of the hernia repair (see Table 1). In group one, 16 patients required overnight hospitalization. These patients had undergone other simultaneous surgical procedures such as TURP or cholecystectomy, or were early experience patients in 1994 and 1995 who had undergone bilateral hernia repairs. In group two, only one patient required overnight hospitalization: a 52-year-old man who underwent bilateral inguinal hernia and umbilical hernia repairs. This man was hospitalized because he developed postoperative urinary retention requiring a Foley catheter, developed intractable vomiting, and lived 60 miles away from the surgery center. He was discharged the next day in good condition without a catheter.

Eighty percent of all patients were off of prescription narcotics by the third day after surgery, and 95 percent were off by the seventh. By then, most patients were on either Ibuprofen or Acetomenophen. Patients are routinely checked at one and four weeks postop. Normal activities begin immediately postoperatively with the exception of driving (one week) and strenuous activity (two weeks). Patients in supervisory or desk work frequently resume work in one week or less after surgery. Eighty-five percent of patients resume mild to moderately heavy work at two

TABLE 1
SIMULTANEOUS SURGERIES

umbilical hernia repair	22
ventral incisional hernia repair	4
laparoscopic cholecystectomy	3
adhesolysis*	7
cysto/TURP	2
needle biopsy of liver	2
excision of anal polyp	1

*included if it required at least 10 minutes extra dissection to give access to the groin for the hernia repair.

TABLE 2

MINOR COMPLICATIONS

seromas*	17(7%)
urinary retention (requiring Foley catheter)	9(5%)
superficial trocar site infection	4(<4%)
neuralgias (up to four weeks)	7(<3%)
orchitis (lasting less than eight days)	9(<5%)

*estimated at four ccs or greater.

MAJOR COMPLICATIONS

small bowel obstruction	1(.6%)
incidental enterotomy	1(.6%)
recurrent hernia	2(<1%)

weeks post-op. Athletic activities resume between two and three weeks (golf, tennis, weight lifting) and totally unrestricted activities, including the heaviest of straining, are resumed by three weeks regardless of the type of hernia the patient had.

Of the 38 patients who had undergone a previous conventional hernia repair, 100 percent preferred the laparoscopic approach.

Complications are listed in Table 2. Of the minor complications, seroma was the most common of these. One large seroma-hematoma was aspirated, but the rest disappeared on their own within four weeks. Urinary retention required a Foley catheter in nine patients, seven of whom had undergone bilateral inguinal hernia repairs. All catheters were removed within two days after surgery with no recatheterization needed. Painful neuralgias lasting for up to four weeks occurred in seven patients, with one lasting for 18 months. This patient did not return after a four-week follow-up visit, but stated during a follow-up phone call that he had pain for 18 months after surgery.

There were four major complications, defined as those possibly requiring a second surgery. A distal small bowel obstruction occurred two weeks postoperatively in a 52-year-old patient who underwent bilateral inguinal hernia repairs. At laparotomy, a small loop of small bowel was trapped in the pocket between the peritoneum and mesh. Either the closure tore or the staples were too far apart, allowing the loop of bowel to "herniate." He did well after surgery, and since then, much tighter peritoneal closures are insisted upon.

A 32-year-old man who was to undergo bilateral inguinal hernia repair had an incidental small enterotomy involving a Maryland forceps with pointed tips. It was recognized early in the procedure and was repaired through the 12-mm trocar site. He was hospitalized for two days with IV antibiotics and was reoperated upon laparoscopically for bilateral hernia repairs seven days later. He had an uneventful postoperative course, and blunt forceps have been used exclusively since.

Two patients have developed recurrences. The first was a 62-year-old man who developed a direct recurrence after the repair of a large, direct hernia. He expired four months later due to a brain neoplasm before he could have further surgery. The second patient was a 55-year-old construction worker with bilateral inguinal hernias. He developed a recurrent, right, direct inguinal hernia eight weeks post-op and will undergo recurrent laparoscopic repair sometime in the near future. Because both recurrences occurred within 12 weeks of the initial repairs, technical reasons for their development are suggested. No trocar site hernias developed.

DISCUSSION

The concept of tension-free hernia repair originated with Stoppa in 1969 with the first extra-peritoneal patch repair of inguinal hernias. In 1982, Ger did the first laparoscopic repair with mesh at the internal ring. Lichtenstein in 1986 started the anterior approach tension-free repair, even at times placing a "plug" at the internal ring. Later Gilbert, Robbins, and Rutcow popularized the plug being placed into hernia defects.[3]

The many advantages of laparoscopic hernia repairs—including a lower recurrence rate, less overall pain, quicker return to work and athletic activities, and the low need for hospitalization—have all been reported in the literature.[4] All of us have seen patients who develop new hernias many years after the primary repair. If mesh had been used to cover the entire inguinal floor at the original procedure, the new hernia may not have developed. To lower recurrence rates "mesh should be used in almost all hernia repairs" according to Amid.[5]

Prolene mesh is the favorite of many surgeons because of its biocompatibility, resistance to infection, mechanical resistance, structural transparency enabling anatomic structures to be seen through it, and its relative memory allowing a more perfect anatomic placement.[6]

Whether to use a transabdominal (TAPP) approach or the total extraperitoneal (TEP) approach is best left to the individual surgeon's preference and experience. Each approach has its own strengths and weaknesses. Overall exposure is much better with the TAPP, and this approach makes it easier to repair bilateral hernias and even to find incidental hernias on the opposite side. Indirect hernia sacs are harder to see and more easily missed with the TEP.

There are arguments for staying outside the abdominal cavity also, favoring the TEP, such as the possibility of adhesion related problems, incidental enterotomies, or vascular injuries; however, these are potential complications of any laparoscopic procedure, not just of hernia repairs. They can be successfully prevented by the Hasson technique of placement of the first blunt trocar for the camera followed by the use of blunt instruments for hernia repairs. The unusual occurrence of complications should not be the one limiting factor in not using laparoscopic hernia repairs. The initial high rates of common bile duct injuries and their persistent occasional occurrence (a very serious injury indeed!) certainly did not curtail the performance of laparoscopic cholecystectomies.

Selecting the best operation for each individual patient and each individual hernia is of prime importance. Nyhus only recommends removal of the sac and suture of the internal ring for type I and II hernias, but Amid suggests mesh for all hernias. Patient education is mandatory in all cases to give the patient the best choice of type of repair depending upon his type of hernia(s) and his goals for recovery.

The cost of laparoscopic hernia repairs is one of the most controversial topics. A study by Liem et al. compared the costs of laparoscopic repairs to that of conventional anterior repairs while taking into account surgeon fees, hospital charges, societal (job related) costs, and personal (non-medical) costs to the patients. It was found that overall costs of laparoscopic bilateral inguinal and recurrent inguinal hernia repairs are significantly less than conventional repair costs. Laparoscopic primary repair of unilateral hernias was more expensive, but 75 percent of these extra costs were offset by societal and work savings.[7] Laparoscopic costs can be lowered even further by using reusable trocars and sutures whenever possible. A surgeon's wider experience also lowers the operative time, in effect lowering the room and anesthesia charges. Other tangibles, such as overall lower recurrence rates (less than one percent), fewer complications, fewer infections, and lower pharmacy charges, make the laparoscopic hernia repair an excellent alternative to conventional methods.

CONCLUSION

The results of 234 inguinal hernia repairs in 165 male patients utilizing the TAPP laparoscopic technique have been reported. It has been shown to be a very worthwhile technique for repair of inguinal hernias. It is a viable surgical option for well-motivated and well-informed patients. ❐

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SARCOID-ASSOCIATED MINIMAL CHANGE DISEASE: A CASE REPORT

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Sarcoidosis is a systemic disease of unknown etiology affecting from 10 to 40 of every 100,000 Americans and Europeans. In the United States, the majority of the patients are African-Americans. Its prevalence amongst African-Americans is 10 times that of whites. African-American women are affected twice as frequently as African-American men.[1] A similar six-fold increase in the black population has been reported in South Africa.[2] The most commonly affected organ is the lung. Renal involvement is well-described in the medical literature.

CASE PRESENTATION

The patient is a 30-year-old married African-American woman referred to us for investigation of proteinuria. She complained of left lower quadrant pain, weakness, headaches, nausea, and vomiting. She had recently gained a lot of weight. On examination, she weighed 173 pounds, the highest she ever weighed. There was periorbital edema and 3+ pitting edema of the legs, ankles, and sacrum. She was alert, oriented, and in moderate distress. Her temperature was 99.8 F. The pulse was 92 per minute and regular. The blood pressure was 140/86 mm of mercury, without orthostasis. The respiratory rate was 28 per minute at rest. The cranial nerves were intact, the sclerae were clear, and the fundi were normal. Oral cavity was unremarkable. There was no cervical lymphadenopathy, no goiter. The lungs were clear to percussion and auscultation. The heart had a regular rhythm and the heart sounds were normal. The liver was felt one finger-breadth below the right costal margin. The spleen was not palpable. There were no palpable masses in the breasts or in the axillae. The neurological examination was physiological.

HABITS

The patient is a heavy smoker, one pack a day for 15 years. She does not drink alcohol. There is no history of illegal drug use.

LABORATORY DATA

The Hgb was 15.2 grams per dl, and Hct was 44.4 percent. The white cell count was 15,600 with a normal differential count. The serum sodium was 137 mEq per liter, serum potassium 4.6 mEq per liter, serum chloride 104 mEq per liter, and carbon dioxide 28 mEq per liter. Calcium was 8.6 mg/dl, with an albumin of 3.5 grams per dl, glucose was 113 mg/dl, creatinine was 1.0 mg/dl, BUN was 9 mg per dl, total CPK was 121 IU per liter, and SGOT was 27 IU per liter. Urine specific gravity was 1.018 by dipstick. There was 3+ protein and a trace of blood. Glucose was negative. Ketones were negative, bilirubin negative, and nitrite negative. The urine pH was 7.0. The sediment revealed three to five RBCs per HPF, and 0.2 WBCs per HPF. The ANA was negative; the rheumatoid factor was negative, C3, C4 normal. Hepatitis B antigen was negative, Hepatitis C antibody was nonreactive, and cryoglobulins were not detected. The 24 hour urine for creatinine clearance was 83 ccs per minute. The 24 hour urine protein revealed 10 grams. An IVP done prior to admission was normal. On ultrasound, the kidneys were of normal size and shape. She had a normal retrograde pyelogram. There was no reflux. The serum protein electrophoresis was normal. Twenty-four hour urine for immunofixation did not reveal any light-chains.

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The chest X-ray revealed patchy pulmonary opacities, some of which were rounded with ill-defined margins. Sputum for AFB was negative, so were the sputum cultures after eight weeks. Blood cultures revealed no growth.

Because of the abnormal chest X-ray, a pulmonary consultation was obtained. Abdominal and pelvic CT scans revealed a small amount of ascites in the abdomen and pelvis, but nothing to explain the left lower quadrant pain was found. Bronchoscopy with transbronchial biopsy revealed non-caseating granulomas, compatible with a diagnosis of sarcoid. A bilateral pulmonary angiogram was normal. CT of the sinuses was normal.

A closed kidney biopsy was done and sent for light microscopy, immunofluorescence, and electron microscopy. The impression was that of minimal change disease. She was therefore diagnosed as having pulmonary sarcoid with a nephrotic syndrome secondary to minimal change disease.

The patient was started on Prednisone therapy at 80 mg p.o. q day and Lasix 80 mg p.o. b.i.d. She was followed up as an outpatient, and eight weeks later her nephrotic syndrome was in remission and she was spilling 174 mg of protein in a 24-hours urine specimen. Chest X-ray at that time revealed resolution of the previously-noted infiltrates. The dose of Prednisone was reduced. The patient started to complain of severe bone pain affecting mostly the ankles and the knees. The patient had consultations with an orthopedic surgeon and a rheumatologist. She had a bone scan that revealed early changes of osteonecrosis affecting both knees, tarsals, and carpal bones. MRI confirmed avascular necrosis. Because of those changes, the severity of the pain and the morbidity attached, Prednisone was quickly withdrawn and discontinued. Three weeks later, the patient again had a relapse of the nephrotic syndrome and exacerbation of the pulmonary symptoms. Because of the previous experience with Prednisone, she refused another course of therapy. It was therefore decided to give her a trial of treatment with Cytoxan. She was started at 2 mg per Kg body weight of Cytoxan by mouth. Due to anorexia, nausea, and vomiting, the oral Cytoxan was discontinued and she was given instead one gram of Cytoxan IV monthly for the next three months. During that time, the patient's nephrotic syndrome persisted and her pulmonary symptoms did not improve at all. Because of ongoing nausea and vomiting, the patient was readmitted to the hospital, GI consultation was obtained, and on gastric endoscopy, she was found to have plaques on the gastric mucosa which were biopsied. The biopsy revealed non-caseating granulomas compatible with sarcoid. During the same hospitalization, a right lung biopsy was done, and again non-caseating granulomas were found on histology.

COMMENT

Sarcoid involves the kidneys in different ways: interstitial nephritis and granulomas are found in seven to 19 percent of autopsies in patients with sarcoid.[3,4,5] Renal impairment has been described but is rare. Usually, renal involvement in sarcoid is linked with calcium metabolism. Hypercalcemia is found in 10 to 20 percent of all patients.[6] Hypercalciuria is more common and is found in about 60 percent of patients. Hypercalciuria leads to nephrolithiasis nephrocalcinosis, which may result in tubular disorders and renal impairment.

Glomerulonephritis in sarcoid is well described. The commonest type is membranous glomerulonephritis.[7,8] Membranoproliferative,[9] focal glomerular sclerosis,[10] IGA nephropathy, and crescentic glomerulonephritis have all been reported. The pathogenesis of sarcoidosis is thought to result from T-cell activation by an unknown antigen. Cytokines and chemotactic factors are then released promoting an inflammatory response.

The pathogenesis of minimal change disease is also thought to be secondary to a T-cell disorder with release of cytokine that injures the glomerular epithelial cells.[11 12,13]

It is therefore proposed that in this patient the minimal change lesion could be sarcoid related. There are factors in this patient's presentation and course that are in keeping with this theory.

1. Simultaneous presentation of the nephrotic syndrome and pulmonary involvement.
2. The response of both the nephrotic syndrome and pulmonary symptoms to corticosteroid therapy.
3. The relapse upon discontinuation of Prednisone of both nephrotic syndrome and the pulmonary symptoms.
4. The lack of response to Cytoxan.
5. The remission of the nephrotic syndrome, following the low dose of 15 mg of Prednisone daily.
6. The T-cell dependent pathogenesis of both minimal change disease and sarcoid.

SUMMARY

A patient with sarcoidosis developed minimal change disease presenting as the nephrotic syndrome. We believe this to be the first reported case of minimal change disease associated with sarcoidosis. ❒

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THE SUPERVISION OF MEDICAL EDUCATION IN SOUTH CAROLINA: PAST, PRESENT, AND FUTURE*

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Over the last decade, concerns about cost, quality, and access issues related to medical care in the United States have assumed center stage in the political arena.[1] As the spotlight has focused on these issues, questions have naturally been raised about the underlying causes for perceived problems and what might be done to correct them.[2] One area of investigation has been the medical workforce.[3] The general consensus of opinion seems to be that the number and type of physicians produced by our country's medical education system are partly responsible for current difficulties.[4] In addition, data comparing the health of citizens of the United States with other industrialized countries[5] and feedback from administrators of modern health care systems[6] also suggest problems in the structure and function of medical education programs. It appears to some that the governance and oversight of our country's medical education system are fragmented and ineffective.[7,8]

Partly in response to national attention given to this issue as well as the current political environment of conservation and fiscal restraint, politicians and government officials in South Carolina have also raised questions about the effectiveness and efficiency of the state's medical education programs. Legitimate concerns have been expressed about the structure, function, and administration of the entire medical education system. In this paper, we will attempt to address those concerns by reviewing the past history and current oversight of medical education in South Carolina. We will then present specific recommendations for the future supervision of medical education in the state and conclude with a discussion of several implications of our recommendations.

A HISTORY OF THE SUPERVISION OF MEDICAL EDUCATION IN SOUTH CAROLINA

In 1990, the South Carolina Commission on Higher Education (CHE) charged its staff to study the history of its supervision of medical education in the state. The outcome of that study was published in 1992 and presented to the CHE by Mr. Joseph J. Turner, chair of the CHE Committee on Academic Affairs.[9] The CHE publication, now known as the *Turner Report*, states that the CHE study was precipitated by three basic concerns. First, the existing oversight body for medical education at the time, the Joint Health and Medical Education Board (Joint Board), "had not been meeting on a regular basis or fulfilling some of its responsibilities with respect to the coordination of health and medical education activities in an effective and timely manner." Second, the Joint Board had also not been fulfilling its "oversight responsibilities for the Consortium of Teaching Hospitals and the Area Health Education Consortium" that had been given to it because of "concern over the governance structure" of those organizations that had existed "for a number of years." Third, "the consensus of opinion was that in light of the recent resources and fiscal constraints in the state, the coordination, efficiency, and cooperation of health and medical education activities must be maximized in South Carolina."

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*From the Deans' Committee on Medical Education, a subcommittee of the Academic Affairs Committee of the South Carolina Commission on Higher Education. Dr. Faulkner chaired the committee during 1995 and 1996, and Dr. McCurdy during 1997 and 1998; the authors hold the positions of Vice President of Medical Affairs and Dean of the School of Medicine at the University of South Carolina (Columbia) and the College of Medicine at the Medical University of South Carolina (Charleston), respectively.

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The *Turner Report* begins with a history of the Joint Board.[9] It points out that the CHE had "considerable interest in health education" since its inception and that the origins of the Joint Board began with the "widespread discussions which took place throughout the State regarding the start of the new University of South Carolina School of Medicine in 1974." At that time, concerns were "widely expressed" about a "need for a comprehensive planning effort dealing with the quantity, specialty area, and distribution of medical students, interns, and residents from the two schools" and a "need for cost-containment for the State and its taxpayers in the operation of the two medical schools."

From the early 1970s to the early 1980s, the *Turner Report* indicates that a number of boards, committees, and authorities were initiated for the study, planning, and coordination of health education.[9] For example, the Health Education Authority (HEA) (1974-1982) was created in 1974 to advise the CHE on matters relating to health education. The HEA consisted of representatives from various health professions, state agencies, and higher education institutions, and by 1982 its size had increased to 27 members. No new program of health education could be considered by the CHE until it had been reviewed by the HEA and a recommendation was sent forward by the HEA to the CHE. In 1978, the CHE created its own Committee on Health and Medical Education (1978-1988) to serve as a liaison with the HEA and to "provide a mechanism for the CHE to respond to the substantial percentage of educational funds expended for health and medical education, the increasing importance of this segment for higher education in terms of the national need for improved health care at cost-effective levels, and the necessity for coordination of the two medical schools in South Carolina."

As the state's second medical school started to develop at the University of South Carolina (USC), the *Turner Report* suggests that health education coordination activities began to focus predominantly on medical education.[9] In 1976, the South Carolina General Assembly established the Deans' Committee on Medical Doctor Education (DCMDE) (1976-1983), consisting of seven members: the presidents of the USC and the Medical University of South Carolina (MUSC), the deans of the two medical schools, the Governor or his appointee, the chairman of the CHE or his appointee, and an appointee of the Veterans' Administration. The purpose of the DCMDE was "to establish an active liaison between the two schools of medicine, to study and make proposals as to the feasibility of sharing services and resources so as to minimize duplication of administrative and research functions, to assist in the coordination of graduate medical education of interns and residents at the respective institutions and at affiliated community hospitals, and upon request, to serve in an advisory capacity to the General Assembly and its committees, to the Budget and Control Board, to other institutions of higher education, and to any hospital operating a graduate medical education program." The General Assembly's stated intent in establishing the DCMDE was "to help assure that the future growth and development of both schools of medicine will be coordinated so as to achieve maximum effectiveness, and further to help assure that the administrative functions and mechanisms are coordinated so as to achieve the highest possible degree of operational efficiency." While the *Turner Report* itself does not report it, the law establishing the DCMDE states that "it is not the intent of the General Assembly to merge the two Schools of Medicine or to place either school in a position of control over the other".[10]

The *Turner Report* indicates that the DCMDE met "more or less on a quarterly basis" from 1976 to 1983.[9] The first two years were evidently "characterized by general good will and a cooperation between the two medical schools." A variety of issues were discussed, including the geographic distribution of health care professionals in South Carolina, admission procedures at the two medical schools, minority recruitment, the role of the CHE in medical education, the Consortium of Community Teaching Hospitals, and the Area Health Education Consortium (AHEC). By 1978, however, attendance at the meetings became sporadic, the frequency of the meetings declined, and questions were raised concerning whether the DCMDE should be disbanded. By 1981, "little meaningful activity was taking place" within the DCMDE. Proposals to replace the DCMDE were drawn up by the CHE staff, but no subsequent action was taken on them initially.

In 1983, the Blue Ribbon Committee on Medical Doctor Education issued a report concerning the future demand for physicians and the structure of medical education in South Carolina. According to the *Turner Report*, the CHE then "increased its efforts to establish a new board of directors for medical education," and also endorsed a "cooperative agreement proposed to Governor Riley" by the presidents of MUSC and USC to create the Joint Board.[9] The purpose of the Joint Board was to "foster coordination, efficiency and cooperation" between MUSC and USC in "health and medical education and related activities. Related activities include but are not limited to teaching hospitals, research centers, and programs offered through the Consortium of Community Teaching Hospitals." The goals of the Joint Board were also to consider and make recommendations to the CHE concerning the following seven issues: (1) the governance and funding of the Consortium of Community Teaching Hospitals; (2) the appropriate number of undergraduate medical students in the state; (3) the appropriate number of residency programs, positions, and locations throughout the state; (4) the education of other health professionals; (5) any unique cost request; (6) all capital construction requests, regardless of the source of funds; and (7) all proposals for new programs, as defined by the CHE.

The official composition of the Joint Board was to consist of two members of the Board of Trustees and the president of MUSC, two members of the Board of Trustees and the president of USC, two members appointed by the CHE, the Governor or his designee, and an appointee of the Governor. The *Turner Report* indicates, however, that in practice, the deans of the two medical schools, the provost of USC, the vice president for academic affairs of MUSC, the executive director of AHEC, and a staff representative of the CHE also attended the meetings. The Joint Board was to meet quarterly with the chairmanship rotating every two years between the university presidents.

According to the *Turner Report*, the Joint Board met on a fairly regular basis from 1983 to 1988.[9] A "cordial relationship was established" between the participants and "efforts to cooperate in the planning and coordination of health and medical education were improved." However, the *Turner Report* also contends that the Joint Board was not effective in accomplishing most of its seven goals listed above. The Joint Board evidently stopped meeting regularly in 1988. It actually met only once from 1988 to 1992 in order to discuss and approve a new governance structure for AHEC which it then never followed. The *Turner Report* notes that because of the inactivity of the Joint Board, the Consortium of Community Teaching Hospitals, and AHEC "have continued to report to the MUSC Board of Trustees and the South Carolina AHEC Deans Council."

The *Turner Report* suggests that the inactivity of the Joint Board was the result of a perception that "the underlying circumstances which had led to its formation have been so altered with the passage of time as to suggest the advisability of replacing it with a new entity."[9] The *Turner Report* goes on to state that "the Joint Board was created at a critical time in the history of the State's established medical school and its new medical school when it was necessary to define the very basic parameters of interrelationship in a less than ideal climate of competitiveness, reluctance, and self-protectiveness. Once it became apparent that major 'treaty' issues (e.g., size of respective entering classes) could be and were resolved cooperatively and missions of both medical schools were to be kept complementary but distinctive...the urgency that had driven the establishment of the Joint Board was dissipated...If a climate of duress once brought the players to the Joint Board table, that is certainly no longer the case...the tenor of the times has been improved so dramatically that what once was at least a debatable proposition-the necessity for cooperation and avoidance of duplication-has been superseded by a commitment to seek aggressively new avenues for collaboration."

The *Turner Report* concludes with a recommendation to the CHE that the Joint Board be replaced with a new entity to be called the Deans' Committee on Medical Education (DCME).[9] The DCME would "ensure the continued exploration of new avenues for cooperation, collaboration, and joint endeavors at a level appropriate to the increased maturation of each medical school and the renewed commitment of each institution to enhance its own achievements through outreach efforts to broader constituencies."

It was recommended that the membership of the new DCME consist of: the presidents of MUSC and USC and/or their designees, the deans of the two medical schools, and a member of the CHE and/or a designee. CHE staff were to serve as staff and secretary to the DCME, and the DCME was to meet quarterly and set its own agenda.

The *Turner Report* also recommends that the goals and objectives of the DCME "would remain consistent with those of the Joint Board" and would be "to foster coordination, efficiency and cooperation" between MUSC and USC in "health and medical education."[9] It was suggested that possible activities might include the "development of a strategic plan for cooperative medical education, development of a statewide strategic healthcare plan, exploration of the appropriate support roles for MUSC in assisting USC in fulfilling its mission to educate primary care providers, and the development of a coordinated plan for recruitment of minority medical students."

Finally, the *Turner Report* suggests that it would be appropriate to transfer the "official oversight responsibility for the Consortium of Community Teaching Hospitals and AHEC...to MUSC," since "MUSC is fiscal agent for AHEC and as such, and in the absence of the assumption of that responsibility by the Joint Board, has line authority over AHEC's Executive Director."[9] It was also recommended that the CHE request the General Assembly to repeal the statute that has established the DCMDE because that group had been inactive since the creation of the Joint Board.

Our review of the past history of the supervision of medical education in South Carolina by the CHE leads us to several tentative conclusions. First, the CHE has had an interest in monitoring medical education since its inception in the early 1970s. Second, there has been a longstanding recognition of the need for some oversight group to establish a liaison between the two medical schools, coordinate and maximize the efficiency of undergraduate and graduate medical education programs, conduct comprehensive planning concerning the state's medical workforce, coordinate and provide oversight of AHEC and the undergraduate and graduate medical education programs in teaching hospitals, function as a forum for issues related to medical education changes, costs, and policies, and serve in an advisory capacity to the CHE and the General Assembly. Third, the many overlapping groups and structures that have existed to supervise medical education over the years (e.g., CHE oversight groups, universities, teaching hospitals, AHEC) have resulted in blurred boundaries of authority and responsibility. Fourth, the proposed membership of the different oversight groups (e.g., Governor, university presidents, university trustees) has made it difficult to sustain ongoing, meaningful participation in supervisory activities. Fifth, the lack of a formal requirement for regular reporting of oversight group activities to the CHE or the General Assembly has resulted in unclear performance expectations. Sixth, the mission and objectives of past oversight groups were often vague and unclear. Seventh, the improved cooperation between MUSC and USC in recent years has made original concerns for oversight of their relationship less important. Finally, the need still exists for an oversight group to promote cooperation and ensure coordination between MUSC, USC, and other institutions and organizations concerned with medical education in South Carolina.

THE CURRENT STRUCTURE AND FUNCTION OF THE DEANS' COMMITTEE ON MEDICAL EDUCATION

At its regular meeting in June of 1992, the CHE formally adopted the recommendations of the *Turner Report* concerning the DCME. However, the CHE has evidently never followed through with the *Turner Report* recommendation to ask the General Assembly to repeal the 1976 statute creating the old DCMDE. In any event, since the *Turner Report* was published in 1992, a group calling itself the DCME has met on a regular basis and functioned more or less according to the recommendations outlined above. While the official membership has consisted of those individuals recommended, in practice the DCME has also included representatives from several community teaching hospitals and the executive director of AHEC. The Chair of the DCME has alternated every two years between the deans of the state's two medical schools.

The increased activity of the DCME over the last few years was prompted by an awareness on the part of its members that politicians and government officials were calling for an examination of the efficiency and effectiveness of all of higher education in South Carolina. Questions were being raised about the duplication of medical education programs and the extent of collaboration between the state's two medical schools. The CHE was also scheduled to undertake a thorough review of medical education in South Carolina during 1996-1997. Members of the DCME felt strongly that the DCME should be the group through which the CHE should function, and they realized that the DCME needed to demonstrate that it could indeed function effectively. To that end, the DCME proceeded to focus vigorous deliberations on two major areas: (1) a proposed structure and function for the DCME itself, which will be described in the next section, and (2) strategic planning for medical education in South Carolina, which has recently been summarized in another publication.[11]

RECOMMENDATIONS FOR THE FUTURE STRUCTURE AND FUNCTION OF THE DCME

Members of the DCME felt that if it was to provide effective oversight of medical education in South Carolina, considerable attention would need to be paid to how the DCME itself was structured and functioned. Special care would have to be taken to prevent problems that had plagued previous oversight groups. This meant that questions concerning the relationship of the DCME to the CHE, the medical schools and their parent universities, the community teaching hospitals, and AHEC would all have to be clarified, as would the DCME membership, mission and vision, operating principles, objectives, and strategic planning content and format. In this section, we will present the recommendations the DCME has made to the CHE concerning each of these issues.

Relationship of the DCME to the CHE. The DCME should provide oversight of all medical education programs in South Carolina by reporting to the CHE through its Committee on Academic Affairs. It is important to note that while the institutions providing medical education in South Carolina would be supervised by the DCME, they would also be responsible to their respective administrations and governing bodies.

Membership. The proposed membership of the DCME includes the presidents of USC and MUSC or their designees, the deans of the two medical schools, a member of the CHE and/or a designee who is a physician with experience in medical education, and three members selected by the Deans' Committee to represent the graduate medical education programs in South Carolina. The AHEC executive director and other non-voting individuals would be invited to participate in the deliberations of the DCME, and CHE staff would serve as staff and secretary to the DCME.

Mission and Vision. The mission of the DCME should be to promote cooperation and ensure coordination between MUSC, USC and other institutions and organizations in the development and implementation of strategic plans for effective and efficient medical education, research, and related clinical service programs of appropriate type, number, size, and location to best meet the needs of the state of South Carolina.

The vision of the DCME should be for it to assume the leadership role in ensuring and coordinating the development and implementation of strategic plans for effective and efficient medical education, research, and related clinical service programs to best meet the needs of the state of South Carolina.

Operating Principles. The DCME should be guided by the following operating principles:

(1) The DCME chair will alternate every two years between the deans of the schools of medicine at MUSC and USC.
(2) DCME meetings will be held at least quarterly.
(3) A DCME strategic plan will only be completed after receiving input from representatives of affected institutions.
(4) To the extent feasible, data will be used to inform DCME strategic planning.
(5) DCME strategic plans will consider the effectiveness, efficiency, quality, and geographic and population distribution of programs.
(6) DCME strategic plans will consider state and local needs for programs.
(7) DCME strategic plans will consider the ability of medical education programs to produce well-trained physicians who are scientifically and humanistically competent, able to think critically, capable of practicing in an ethical manner, and willing to participate in specialties and areas of most need in South Carolina.
(8) DCME strategic plans will consider the need for continuity between undergraduate, graduate, and continuing medical education programs.
(9) Adoption of DCME strategic plans will require the approval of at least one voting member representing USC and MUSC and a super majority (at least 70 percent) of the total voting membership.
(10) DCME strategic plans that propose consolidating, eliminating, or establishing medical education programs will be transmitted to the CHE Committee on Academic Affairs for its consideration.

Objectives. The DCME should pursue at least the following six objectives:

(1) Develop and regularly update its organization, membership, mission, vision, operating principles, and objectives.
(2) Make recommendations concerning its structure and function to the CHE.
(3) Provide oversight of AHEC by reviewing and approving its strategic plan and budget.
(4) Identify specific medical education, research, and related clinical service issues for strategic planning.
(5) Outline a format for its strategic planning activities.
(6) Present strategic plans concerning specific issues to the CHE and other interested institutions and organizations.

Issues for Strategic Planning. Specific issues proposed for possible strategic planning by the DCME include undergraduate, graduate, continuing medical education and faculty development; biomedical and health services research; clinical services related to medical education and research; minority student and faculty recruitment; and the medical workforce in South Carolina. In addition to participating in statewide planning efforts for the DCME, each institution providing medical education in South Carolina would also be responsible for its own unique strategic planning concerning these specific issues.

Format for Strategic Planning. The DCME should adopt a specific format for strategic planning that outlines its process, content, and outcome. The strategic planning process would identify the planning participants, the location and dates of planning meetings, and the timeframe for the planning effort. The content of strategic planning would summarize the current status of the issue under consideration, review data pertinent to the issue, outline major concerns identified about the issue, and develop an action plan to address those concerns. The outcome of strategic planning would be the development of a strategic plan report on the issue under consideration that summarizes the process and content of planning and outlines specific follow-up steps to the proposed action plan.

RESPONSE OF THE CHE

The specific recommendations for the future structure and the function of the DCME were presented to the CHE on May 7, 1998. The CHE accepted the recommendations of the DCME concerning the planning, monitoring, and evaluation of medical education in South Carolina. The CHE also accepted the proposed membership for the DCME except that, instead of the CHE appointing a member of the CHE and/or a designee who is a physician with experience in medical education as recommended by DCME, the CHE decided to specifically appoint two members. The first appointment will be an individual fulfilling the requirements recommended by the DCME, and the second appointment will be a representative of the business community. The CHE also recommended that steps be taken to amend the 1976 statute creating the old DCMDE to make it consistent with the approved recommendations of the DCME.

DISCUSSION

We believe there are several major implications of the new structure and function of the DCME that warrant further comment. First, the CHE will now clearly be recognized as having oversight authority over all of medical education in South Carolina. It will discharge that authority through the Academic Affairs Committee and the DCME. MUSC, USC, and the teaching hospitals will retain direct administrative responsibility for specific programs, and MUSC will continue to administer AHEC, but the DCME will provide overall strategic planning and supervision of the state's medical education and related programs.

Second, the expanded membership of the DCME will ensure that the business community and all components of the medical education system in South Carolina have a role in determining the future direction of the state's medical education programs. This should create a broad base of support for strategic planning recommendations.

Third, the DCME will explicitly be expected to meet on schedule, develop specific strategic plans, and report to the CHE on a regular basis. If the DCME failed to fulfill its obligations, the CHE might be expected to take steps on its own or to create another group to provide oversight of programs. In that event, the medical institutions themselves will lose considerable influence over their own future direction.

Fourth, the focus of DCME strategic planning will be on promoting quality programs of the type, size, and location that will best meet the needs of the citizens of South Carolina. Individual institutions will no longer be able to create new medical education programs or make major changes in existing programs without demonstrating that the need in South Carolina supports their plans.

Fifth, the format for strategic planning will promote a structured, thorough investigation of issues certain to be complex and most likely controversial. This organized approach to planning should help ensure that recommendations are based more on sound data than on political influence.

Finally, the process for adoption of strategic planning recommendations by the DCME will ensure that its decisions are made by consensus. This should prevent a few institutions from dominating the process.

In conclusion, we believe that the new structure and function of the DCME will provide an excellent framework to address concerns expressed about the state's medical education system. Its new organization should minimize many of the problems experienced by past oversight efforts and should help to ensure that efficient and effective medical education, research, and related clinical service programs are designed to meet the future needs of the citizens of South Carolina. ❒

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Editorials

Guest editorials reflect the opinions of the authors and do not necessarily reflect the opinions of the officers and trustees of the South Carolina Medical Association.

—CSB

INVESTING IN THE TORT SYSTEM

A recent editorial in *The State* newspaper (Sat., May 23, 1998) recounted the exchange between Senators Faircloth and Hollings over the proposed tobacco settlement. During that exchange, Senator Faircloth argued that tobacco legislation should cap the fees of lawyers at $250 per hour. The Senator noted that if attorneys were to receive only a 15 percent contingency fee on the $600 billion dollar settlement, lawyers would profit to the tune of $100 billion dollars. Senator Hollings, a noted trial lawyer from South Carolina, instructed Senator Faircloth that the lawyers who brought the initial lawsuit against the tobacco companies undertook significant risk and invested large amounts of their own time and money in bringing suit and therefore deserved to be handsomely compensated.

These comments bring up a fundamental problem with the United States tort system and the contingency fee system on which it is based. Lawsuits are supposed to be about justice but instead they seem to be about investments. A few years ago, some attorneys on the west coast were selling shares in lawsuits against large companies. The theory was that selling shares of stock or partnerships in such lawsuits would raise the capital to finance the lawsuit, and, if and when it paid off, the investors would be generously rewarded. Imagine yourself as an attorney bringing a large contingency fee based lawsuit against a physician for malpractice or against a huge company such as General Motors; a verdict in your favor of say five or 10 million dollars (not all that unusual in this day and time) could provide you with enough income such that you would never have to work again. The contingency fee based tort system is like a lottery; you only need one big win to set you up for life. Currently, multiple class action lawsuits pending against physicians and companies over medical devices and drugs threaten to create a whole new class of wealthy attorneys and law firms, making "investing" in the legal process a very rewarding career move. Interestingly, individual patient awards are often small when suits are adjudicated.

In my opinion, there is something fundamentally wrong with a legal system in which tort actions are viewed as investments. Attorneys deserve "reasonable" fees for "legally necessary" services and deserve to be reimbursed fairly for actual out-of-pocket expenses.

Since the White House is occupied by lawyers and legislatures are largely made up of lawyers, meaningful reform of the system is unlikely any time in the near future. The number of fabulously wealthy law firms and individual attorneys profiting from the contingency fee based tort system is rapidly increasing. The United States has over one million attorneys and the vast majority of the world's attorneys practice in the United States. The rapidly increasing number of liability torts is a financial and competitive drain on the U.S. economy. There is conflicting opinion that such lawsuits promote either safety or health for U.S. citizens, since in most suits only a few individuals receive monies and court records are often sealed. The U.S. citizenry should complain loudly about the kind of attorneys' fees that are being proposed in the anti-tobacco settlement.

Meantime, South Carolina Medical Association members can cogitate on the point that $250 an hour is pauper's pay for attorneys!

R. Duren Johnson, Jr., M.D.
800 West Meeting Street
Lancaster, SC 29720

TEEN PREGNANCY PREVENTION: NOT QUITE A COMPLETE SUCCESS STORY

Nationwide, teen births among all races appear to be declining. According to the National Center for Health Statistics, a federal agency on health statistics, the sharpest declines were among black teens with a 21 percent drop from 1991 to 1996.

Among the many reasons for such a success story is the rise in popularity of both abstinence and voluntary contraception. The latter include short and long-term methods. According to a recent report by Alan Guttmacher Institute, a New York based research and education group, "Teen girls 15 to 17-years-old show the highest numbers for use of DepoProvera, even though it was originally thought to be a drug that older women would use the most." In addition, improved economy encourages more teens to think about careers and less about sex.

But there is a deeper meaning behind this rewarding accomplishment. The concept of involvement of more and more people of diverse views and diagonal convictions toward one noble goal of teen pregnancy prevention is, by itself, a great success story.

Afterall, when it comes to adolescent pregnancy prevention strategies, platitudes are no substitute for a genuine concerted effort to understand the issue as a totality.

Moreover, the best assurance for society that pregnancy rates in adolescents are to continue waning rather than waxing is recognizing the importance of parents talking to their kids. According to national research done by the National Campaign to Prevent Teen Pregnancy, "parents do matter in the ongoing relationship that makes teenagers feel comfortably close enough to talk candidly with parents about their parents' values."

But while lowering the rate is a great health care achievement, we have a long way to go. Despite the steady wane in the teen pregnancy rate, the United States still has the highest rate, by far, of any industrialized nation—twice as high as Britain.

South Carolina has one of the highest teen pregnancy and prematurity rates in the nation. This should give cause for concern to the state's citizens as well as its health care providers.

Sami B. Elhassani, M.D.
100 Willow Lane
Spartanburg, SC 29307

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On the Cover:

WILLIAM THOMAS BROCKMAN (1881-1968)

William Thomas Brockman, president of the South Carolina Medical Association in 1946, was born October 11, 1881, at Reidville in Spartanburg County. He attended Furman University before entering the Medical College of the State of South Carolina from which he graduated in 1909. Dr. Brockman was awarded a one year internship at Roper Hospital, after which he opened a private practice in Greer. In addition to his medical practice, Dr. Tom, as he was known, served as mayor of Greer for three years and has been described as one of the most progressive mayors the town has ever had, putting the town on the road to financial and civil stability.

While practicing in Greer, Dr. Brockman became concerned with the need for proper proctological treatment among his patients. He pursed a number of short courses in this specialty, and in later years he said in an interview,"...my work grew so fast until I was practically pushed into limiting my work to rectal diseases." Dr. Brockman was the first South Carolinian to be made a Fellow and then a Diplomate of the American Proctologic Society.

In 1932, Dr. Brockman moved to Greenville and in 1937 was elected president of the Greenville County Medical Society. During the World War II years, Dr. Brockman spent much time and energy in selling a statewide Blue Cross plan to South Carolina doctors and to members of the State General Assembly. He preached everywhere that Blue Cross was the best defense against federally regulated socialized medicine.

In 1944, Dr. Brockman was selected by the Greenville County Medical Society as the candidate for president-elect of the South Carolina Medical Association. At this time THE BULLETIN described him:

> "...There is no more sincere friend to organized medicine than he. There is no one who has displayed broader vision, or more initiative or more energy in carrying out plans and programs than he. He was president of the Greenville County Medical Society five years ago. It was under his leadership that THE BULLETIN was founded. He it was who started the society on it program of meetings of state-wide interest and of a character so educational that if one attended them for a year, he had had an excellent refresher course in medicine. While he was president, and since, many old scars of enmity and misunderstanding have healed, and the members of the society are annealed into a true fraternity, all working together in harmony for the good of the society and for Greenville's medicine. He, personally, with tact and great understanding brought enemies together. It was a great study in the art of leadership to watch him work.
>
> And when his term of office was over, he did not rest on his laurels, but instead he has continued the great work which he began.
>
> Not so polished as some but he is more sincere; not so learned but that he seeks ever to learn; not a great orator, but a forceful speaker; not so handsome, perhaps, but his large vigorous physique inspires one with confidence in his powers of leadership."

Dr. Brockman also served on the Greenville

City Council for 11 years. Dr. Brockman retired from active medical practice in 1964 at the age of 82 after 54 years of practice. He died December 16, 1968, in his 87th year.

Jane McCutchen Brown, Curator
Waring Historical Library

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Alliance Page

AMA ALLIANCE 1998 ANNUAL SESSION
A DELEGATE'S JOURNAL

June 13, Saturday: Arrive in Chicago; home of the Cubs and Whitesox, the Bears and Bulls, and for the next few days, host for the American Medical Association (AMA) and AMA Alliance Annual Sessions. It is thrilling to be in the "Windy City" and a privilege to serve as SCMAA Delegation Chairman. South Carolina is represented by six state delegates: Alexis Alia, 1998-'99 SCMAA President, Lisa Culpepper, Stephanie Evans, Shirley Meiere, Susan Robbins, and Laurie Schwarz. Hope Grayson, 1997-'98 AMAA Field Director from Charleston, serves as S.C. national delegate. Dee Jewell, Immediate Past SCMAA President, will deliver South Carolina's state report to the House of Delegates.

June 14, Sunday: 12 NOON-Plenary Session runs smoothly and features two members of S.C. delegation. Dee Jewell is introduced as a member of the 1998-'99 AMA Foundation Committee, (formerly AMA-ERF). Hope Grayson is introduced as 1998-'99 AMAA Membership Chairman.

LATE AFTERNOON: 75th Annual Opening Session, AMA Alliance House of Delegates. Patriotic music, stimulating speeches, and award presentations all blend together in a rewarding session. AMA Alliance president, Johnnie Amonette, delivers an eloquent speech on the state of the alliance. Her message about the "power of one" resounds throughout the room and challenges us to act on our convictions, even if we must act alone. Dr. Percy Wootton, AMA President, 1997-'98, addresses us as partners in health care improvement. He thanks us for our $1,308,139.84 contribution to AMA-ERF and announces the name change to AMA Foundation. (Same great fundraising concept, but with expanded community service awards, and a name that's easier on the tongue). Side note: Chicago Bulls win 6th NBA Championship—Chicago goes WILD!!!

June 15, Monday, AFTERNOON: House of Delegates listens intently to Dr. E. Radcliff Anderson, newly hired AMA executive vice president, as he shares goals for the future. His spouse is introduced and is recognized as a new AMAA member. Dee Jewell gives an outstanding S.C. state report and introduces Alexis Alia, SCMAA President 1998-'99, to the House of Delegates. It is announced that S.C. has 10 counties with five percent or greater increase in AMAA membership.

June 16, Tuesday, EARLY A.M.: House of Delegates vote on policy resolutions. The voting goes smoothly and in an orderly fashion. Colleen Adam, (Nebraska) takes the AMA Alliance Presidential Oath of Office from Dr. Percy Wootton.

LATE P.M.: Homeward bound to South Carolina. We are energized, revitalized, and eager to bring an important message to SCMA members—YOUR SPOUSE SHOULD BE AN ALLIANCE MEMBER!! Your spouse's participation in county, state, and national alliances ensures that the voice of organized medicine remains vital and strong.

Shirley Meiere
Chair, S.C. Delegation to AMA Alliance, 1998 Annual Session

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Gray Matter

"Matters of Interest to South Carolina Physicians."

Thornton & Thorne give the medical community something to think about this month.

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The Journal

OF THE SOUTH CAROLINA MEDICAL ASSOCIATION

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SPECIAL ISSUE: MEDICAL ETHICS AND GENE TECHNOLOGY

GUEST EDITOR: ROBERT M. SADE, M. D.

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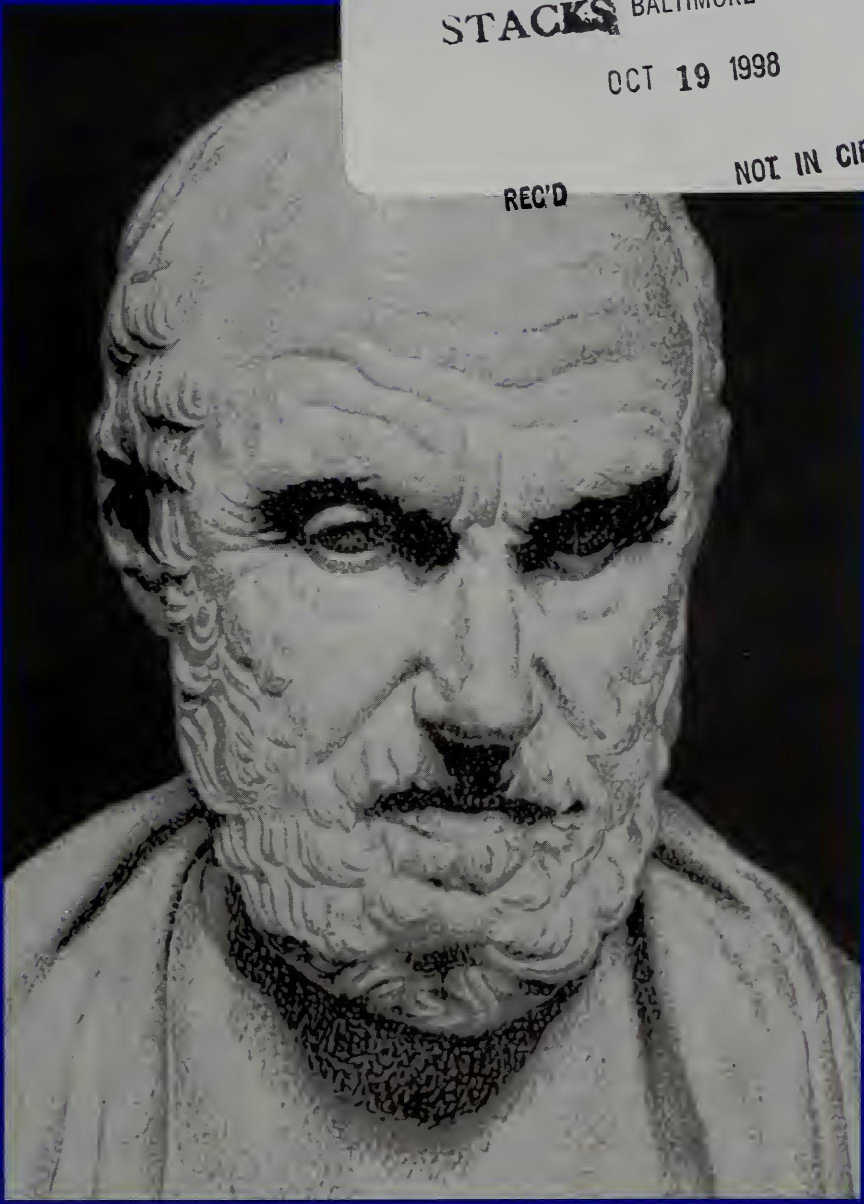

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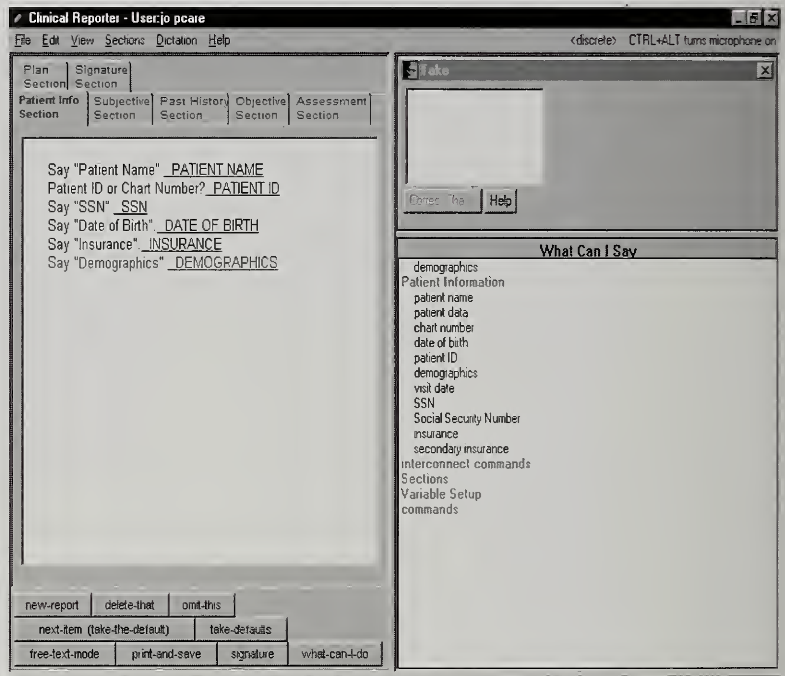

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  - patient data
  - chart number
  - date of birth
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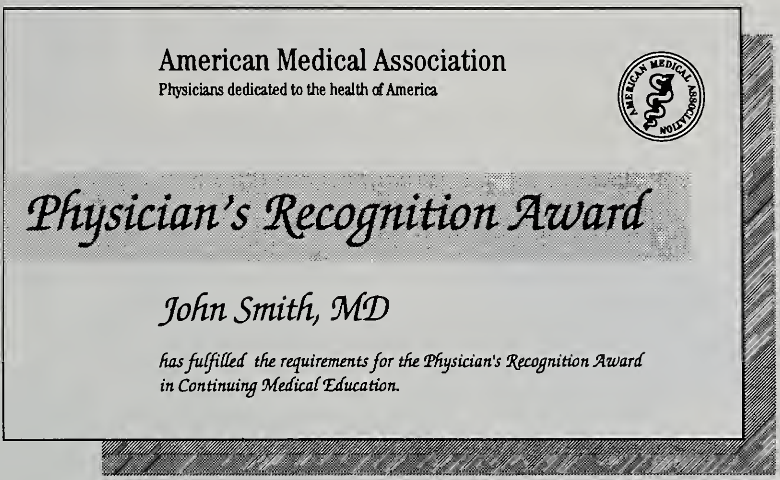

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President's Page

THE SOUTH CAROLINA MALPRACTICE CLIMATE

For about 20 years now, South Carolina physicians have enjoyed a favorable malpractice climate. We have stressed quality medical education and patient care coupled with aggressive risk management of physician interaction and bedside manner. Our new physicians can now take a risk management course and receive favorable insurance rates in their early practice years. In addition, we have aggressively and usually successfully defended all plaintiff cases in the courts.

But recently, things have changed. Large jury awards on cases that our Joint Underwriting Association (JUA) and Patients Compensation Fund (PCF) leadership believed to be defensible have been decided in favor of the plaintiff. We will have to pay higher premiums, but keep in mind our rates are the lowest in the country.

What has changed? South Carolina is now part of the mosaic of the whole United States and our juries have the same attitudes and sympathies as juries anywhere else in the country. Trial attorneys are advertising nationwide, and so we find the legal team has lawyers who are not even from South Carolina. Endoscopic surgery has been involved in many of our recent cases. The rise in the economy has made juries less frugal.

What can we do? First of all, we can continue to practice the best medicine possible. Second, we must keep risk management awareness at the highest level, making sure we do not "oversell" new technologies and use them judiciously. Third, we must continue to renew and support an energized and vital JUA board and staff. Finally, we must reconsider legislative action. Several states now have successful tort reform packages in place which have passed court review. Some of these cap punitive damages and attorney fees.

Stephen A. Imbeau, M.D.
President

The Journal OF THE SOUTH CAROLINA MEDICAL ASSOCIATION

VOLUME 94
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150 Years
1848 - 1998

Continuing Medical Education

Fourth Quarter 1998 Calendar

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Note: CME activities in neighboring states are listed when space permits.
Contact the Medical College of Georgia, Division of Continuing Education at (800) 221-6437 for other activities.

OCTOBER

Thursday – Friday October 1-2, 1998
Charleston, SC: Charleston Hilton
4th Annual Diabetes Symposium for Primary Care Providers
SPONSOR: Medical University of South Carolina
DESCRIPTION: To provide primary care providers with the newest available information on the clinical rationale for improving glycemic control and risk factors in Type II diabetes and the use of various treatment options to achieve this goal.
TARGET AUDIENCE: Primary care physicians
FACULTY: Guest and MUSC faculty
TUITION: $200 before September 18, 1998; $250 after September 18, 1998
CONTACT: Denise Wood; (843) 792-6168
CREDITS: 10 hours, AMA Category 1

Saturday October 3, 1998
Augusta, GA: Radisson Riverfront Hotel
Progress in Infectious Disease
SPONSOR: School of Medicine, Medical College of Georgia
TARGET AUDIENCE: Physicians, physician assistants, and nurse practitioners
TUITION: $65
CONTACT: Division of Continuing Education; (706) 721-3967 or (800) 221-6437
CREDITS: 7.25 hours, AMA Category 1

Wednesday – Friday October 7-9, 1998
Augusta, GA: Radisson Riverfront Hotel
Neonatology – The Sick Newborn
SPONSOR: School of Medicine, Medical College of Georgia
TARGET AUDIENCE: Neonatal physicians and nurses, perinatal physicians and nurses, respiratory therapists, pediatricians, and family physicians
TUITION: $225
CONTACT: Division of Continuing Education; (706) 721-3967 or (800) 221-6437
CREDITS: 15 hours, AMA Category 1

Thursday – Sunday October 22-25, 1998
Hilton Head, SC: The Westin Resort Hotel
Musculoskeletal MR
SPONSOR: School of Medicine, The University of California, San Diego
DESCRIPTION: This course is designed for radiologists and allied health personnel involved in the diagnosis of musculoskeletal disorders. Emphasis will be placed on the clinical application of magnetic resonance imaging, particularly for internal derangement of joints.
FACULTY: Robert Boutin, MD; Andrew Deutsch, MD; Mini N. Pathria, MD; and Donald L. Resnick, MD
TUITION: $650 for physicians, $450 for residents, fellows, and technologists
CONTACT: Ryals & Associates, Inc.; (770) 641-9773
CREDITS: 18 hours, AMA Category 1

Thursday – Friday October 22-23, 1998
Charleston, SC: Medical University of South Carolina Campus
Advanced ERCP Tutorial
SPONSOR: Medical University of South Carolina
DESCRIPTION: Expose participants to new techniques in ERCP and improve understanding of the indications for specific diagnostic and therapeutic techniques and their relative roles compared with radiological and surgical intervention.
TARGET AUDIENCE: Gastroenterologists
FACULTY: Guest and MUSC faculty
TUITION: $700
CONTACT: Rita Oden; (843) 792-6865
CREDITS: 14.5 hours, AMA Category 1

NOVEMBER

Thursday – Saturday November 12-14, 1998
Atlanta, GA: Swissotel
Seizures, Spells, and Shakes: Neurology for the Non-Neurologist
SPONSOR: School of Medicine, Medical College of Georgia
TARGET AUDIENCE: Interal Medicine, family physicians, neurologists, psychiatrists, and psychologists
CONTACT: Division of Continuing Education; (706) 721-3967 or (800) 221-6437
CREDITS: 15 hours, AMA Category 1

DECEMBER

Friday – Saturday December 4-5, 1998
Charleston, SC: Hawthorn Suites Hotel
Frontiers in Pediatrics
SPONSOR: Medical University of South Carolina
DESCRIPTION: An update in pediatrics for the primary care provider
TARGET AUDIENCE: Pediatricians, family physicians, and nurse practitioners
FACULTY: Guest and MUSC faculty
CONTACT: Odessa Ussery; (843) 876-1925

Friday - Sunday December 4-6, 1998
Charleston, SC: Embassy Suites Hotel
Holiday Update in Charleston
SPONSOR: Medical University of South Carolina
DESCRIPTION: An update in general anesthesia issues.
TARGET AUDIENCE: Anesthesiologists
FACULTY: Guest and MUSC faculty
TUITION: $395
CONTACT: Barbara Baylor; (843) 792-1607

Saturday December 5, 1998
Columbia, SC: Sheraton Hotel
2nd Southeast Region Arrhythmias Conference
SPONSOR: USC School of Medicine – Palmetto Richland Memorial Hospital CME Organization
DESCRIPTION: Update on cutting edge issues dealing with cardiac arrhythmias.
TARGET AUDIENCE: Cardiologists, electrophysiologists, and specialty nurses
CONTACT: Steven C. Hasterok; (803) 434-4211

Saturday – Sunday December 12-13, 199
Columbia, SC: Clarion Town House Hotel
6th Annual Alcohol and Drug Issues Conference
SPONSOR: USC School of Medicine – Palmetto Richland Memorial Hospital CME Organization
DESCRIPTION: Update on cutting edge issues dealing with addiction, substance abuse, and care of patients with substance problems.
TARGET AUDIENCE: Physicians interested in patients with substance problems
FACULTY: Anthony Dekker, DO; David Gastfriend, MD; Thomas McLellan, MD; Steven Merlin, MD
TUITION: $95
CONTACT: Steven C. Hasterok; (803) 434-4211
CREDITS: Maximum 8.25 hours, AMA Category 1

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The Journal
OF THE SOUTH CAROLINA MEDICAL ASSOCIATION

VOLUME 94 SEPTEMBER 1998 NUMBER 9

SPECIAL ISSUE: MEDICAL ETHICS AND GENE TECHNOLOGY

INTRODUCTION

CHARLES R. DUNCAN, JR., M. D.*

The field of medical ethics continues to grow as the complexities of modern medical practice with all of its economic influences and increasing patient expectations continue to create confusing choices for patients and physicians.

The Medical Ethics Committee of the South Carolina Medical Association (SCMA) continues to work on issues to develop a body of useful information for South Carolina physicians about the ethical issues facing practitioners in today's health care environment.

The advances in science concerning gene technology raise vital ethical issues. Never before have we been able to predict with clinical certainty the potential for apparently healthy persons to develop serious illnesses. The SCMA Medical Ethics Committee has worked on numerous issues in this developing area over the last several months, both in our regular monthly meetings and at our annual retreat.

In this symposium issue, we approach the issue from numerous points of view.

We are honored to share our work in this issue of *The Journal.* ❑

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*Chairman, SCMA Medical Ethics Committee, 20-A Medical Ridge Drive, Greenville, SC 29605.

Editorials

Guest editorials reflect the opinions of the authors and do not necessarily reflect the opinions of the officers and trustees of the South Carolina Medical Association.

—CSB

BIOETHICAL, LEGAL, AND SOCIAL ISSUES IN GENE TECHNOLOGY

Discoveries in molecular biology are usually announced as good news in our communications media. New genes are found to be associated with breast cancer, cystic fibrosis, and hosts of other diseases, and there is an implicit promise that this knowledge can some day be used to cure those diseases. The spectrum of diseases affecting mankind seems ready to undergo radical alteration through manipulation of their genetic substrates.

Genetic engineering can affect not merely diseases. Genes have been identified for memory, aggression, and recently, obesity. We are close to obtaining the power to alter not only disease processes, but also normal characteristics: we may be able to control intelligence, memory, violent behavior, and body size, for example. Should we be tampering with our genetic heritage in this way?

It is only slightly more than a year since a sheep named Dolly was cloned from an adult sheep using the nucleus of what was believed to be a mature differentiated somatic cell. This summer, 20 mice were reported to have been cloned using the same technology. It may be possible eventually for human beings to duplicate their own genome in their progeny. Should this be permitted? There is the frightening possibility that we may gain the power to radically change society into social strata, using a single genome to create castes of unintelligent workers and highly intelligent masters. In short, we may be able to make Huxley's *Brave New World* a reality. As if these possibilities were not strange enough, our growing ability to manipulate genes may give us the power to alter the very nature of human beings, perhaps even to the point of changing us into a different species.

In juxtaposition to these seeming flights of science fiction fantasy are some very practical ethical issues raised by gene technology—familiar questions of confidentiality of genetic information, adequately informed consent of those who undergo testing or become research subjects, and the extent to which the public good should trump individual rights.

What are we to make of this new technology? We should not expect easy answers to all the questions it raises, but we may be forgiven for wondering whether some of them have any answer at all.

This special issue of *The Journal* is a compendium of the papers that were presented and discussed at the 1998 annual retreat of the Medical Ethics Committee of the South Carolina Medical Association (SCMA). The essays cover a broad spectrum of the bioethical, legal, and social issues raised by new technologies involving human genetic material.

Dr. Donald Saunders reviews the history of the eugenics movement over the past century, and indicates the paths that led to policies and laws that were ill-founded and unjust. He shows how misuse of technology by physicians in the United States was a direct precursor to misuse of the same technologies in Europe and led directly to the human catastrophe of the Holocaust. These lessons of history are further amplified by Drs. Sally Webb, Mary Faith Marshall, and Paul Lombardo. They discuss the historical significance of the case of Carrie Buck, a well-known example of eugenics in the southern United States.

Testing for the presence of various genes associated with disease has become feasible and actually available. Consequently, moral concerns have surfaced relating to the use of genetic test results by people other than the patient and the physician. Dr. Stuart Sprague points to circumstances when such use may be reasonable, and other circumstances where it clearly is not. Potential abuses of genetic information by the insurance industry is a special concern. He suggests that religion has an important role to play as we develop policies governing the uses of genetic information.

Many ethical and social issues have been raised by Dolly, the cloned sheep, and by embryo research in general. Drs. William Butler and John Roberts describe and discuss some of these issues: does an embryo have the same moral stature as a fetus? Do the potential benefits of embryo research outweigh concerns that the embryo may be a person and that treating it as mere tissue may harm us as a moral community? Is it morally acceptable to create a human being using somatic cell nuclear transfer technology? Should chilling but improbable disaster scenarios like the mass production of a lower class of human being deflect us from pursuing research that has many potential benefits? They answer some of these questions by supporting legislation that prohibits the creation of a human child, but contains a sunset provision that will ultimately protect biomedical research.

Drs. Robert Sade and George Khushf first describe the science that has made treatment of disease by manipulation of genes possible, then they explore some of the ethical and social issues raised by gene therapy. Somatic cell gene therapy raises ethical concerns that are familiar in many clinical settings, but germ-line therapy is more complex. It affects not only the patient, but all future progeny as well. Although germ-line gene therapy has potential for major benefits, such as removing disease-causing genes from a family's genetic material for all time, it is also associated with problems. Will germ-line gene therapy have the social consequence of exacerbating class distinctions because those with financial means may be better able to purchase gene technologies? By changing the genome, will we accidentally eliminate important but unappreciated gene functions that could harm future generations?

The final pair of papers in this collection constitute a small debate on what may be the most difficult issue posed by new gene technologies: genetic enhancement of personal characteristics. Dr. Robert Sade describes the range of enhancements that are possible and then argues that enhancement technologies are not new, only the use of gene manipulation as the agent of enhancement is new. He discusses why there is a strong public sentiment to ban genetic enhancement, then argues that such a ban will do more harm than good. He proposes a framework for public policy, addressing enhancement technologies that gives families the power to weigh risks and benefits of genetic enhancement while assuring that they have adequate information to make such decisions.

Dr. George Khushf takes a contrary view. He envisions human genetic material as a commons that should be protected against abuse by individuals. He speculates that a deeply divided and stratified humanity may well come from the aggregation of individual genetic decisions over time. Germ-line genetic enhancement contains elements from the arena of individual rights and from the public domain that, taken together, may justify regulatory policies and laws. It may not be possible to stop the proliferation of enhancement technologies, he concludes, but, whether or not we could stop it, we should pause to "take stock of the dangers that may lie ahead." With that sentiment, few will disagree.

Robert M. Sade, M.D.
Institute of Human Values in Health Care
Medical University of South Carolina
Department of Surgery
171 Ashley Avenue
Charleston, SC 29425

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A public service message from the National Council on Patient Information and Education (NCPIE) and the U.S. Administration on Aging

LESSONS FROM EUGENICS FOR THE NEOEUGENIC ERA

DONALD E. SAUNDERS, JR., M. D.*

By nature men are nearly alike; by practice, they get to be wide apart.
—Confucius

Reproductive medicine, with the tools of onrushing biogenetic science and technology, has confronted us with the potential of a neoeugenic era. The term eugenics was coined by the English scientist, mathematician and explorer Francis Galton in a book titled *Inquiries Into Human Faculty* published in 1883, 24 years after his cousin Charles Darwin published *The Origin of the Species by Means of Natural Selection*. Eugenics is compounded from *eu* (good) and *genos* (Greek for race or offspring). The prefix *neo* refers to a new and different form of eugenics. In its positive form, eugenics seeks to enhance human populations by selective breeding or, in today's neoeugenic world, by direct genetic manipulation or selection. In its negative form, eugenics seeks to delete persons labeled defective and inferior through segregation from those judged fit or superior by institutionalization, sterilization, euthanasia, or genocide. By its nature, eugenics unites biologists, other life scientists, and physicians with sociologists, reformers, and those advocating or possessing the coercive power of the state to put eugenic plans into action. To help us avoid the repugnant misuse of eugenics in the first half of the 20th century, it is important that we all know what happened in Europe and the United States at that time and also try to understand why leaders in science, medicine, and politics chose to believe and act as they did.

The hypothesis to be advanced is that eugenics thrived in places where the biological and medical sciences were most advanced for the time, where medical education was most comprehensive and scientific, and where the notion of human progress based on science and technology was most influential in determining public policy. Specific examples will be Germany and the United States, with particular focus on what is generally referred to as the "Deep South" and South Carolina in particular.

Francis Galton was among the first to recognize the implications for humans of Darwin's theory of evolution. His "eminent men" study led to his promotion of breeding of aristocratic men, whose success he attributed to biological inheritance with wealthy women. Apparently, he was unable to separate his "science" from his social prejudice as an English gentleman.[1] Eugenics is based on biological determinism, meaning that social, economic, and some behavioral differences between human groups, primarily races, classes and sexes, are of genetic origin. As a result, society more accurately reflects biology rather than nurture or environment.[2]

THE UNITED STATES

The American Eugenics Society was founded in 1926 by people who believed that the white race, and in particular "Nordic" whites, was superior. It is now generally agreed that races are groups of humans who have been more or less isolated geographically or culturally and who share a common gene pool with other races. Races are genetically open sys-

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*Address correspondence to Dr. Saunders at the Office of Medicine, Humanities and Society, University of South Carolina School of Medicine, Columbia, SC 29208.

tems meaning that mating can and does occur between races with the expected gene exchanges. Species, by contrast, are genetically closed systems which make species differentiation irreversible.

In the early 19th century, Samuel George Morton was a Philadelphia physician with American and Edinborough medical degrees who won international fame as a scientist who, based on study of his collection of more than 1,000 human skulls, thought races were different species. Morton set out to rank races by average brain size, which he indirectly measured by filling the cranial cavity of his skulls first with sifted white mustard seed and later with lead BBs. His final report in 1849 matched his hierarchial hypothesis: whites were at the top, Indians in the middle, and blacks on the bottom. Among whites, Teutons and Anglo-Saxons on the top.[2] In 1977, Steven J. Gould reanalyzed Morton's data from Morton's own meticulously preserved raw measurements and found no differences between races. Among other things, Morton never considered the variable of sex or stature of the persons whose skulls he measured.

Such so-called scientific evidence that blacks were inferior had appeal to supporters of slavery. In 1851, when Morton died, Dr. R. W. Gibbes of Columbia, South Carolina wrote in the *Charleston Medical Journal*: "We of the South should consider him our true benefactor, for aiding most materially in giving to the negro his true position as an inferior race."[2] On the other hand, John Bachman of Charleston, a 19th century South Carolina minister and naturalist, was convinced that all human races belonged to the same species, adhering to the biblical story that all human races descended from Adam and Eve.

Measuring heads and brains continued into the 20th century. In 1906, a Virginia physician, Robert Bennett Bean, published an article comparing brains of American blacks and whites. He reported differences between the races in the size of the corpus callosum as well as in other parts of the brain but found no difference in overall brain size. His mentor at Johns Hopkins was suspicious of the data and remeasured brains without knowing the race until *after* the measurements. He found no differences between blacks and whites. Bean, like Morton, was apparently unconsciously biased by his social convictions.[2]

A principle 20th century eugenic theme which involved measurement of intelligence as a single quantity was termed IQ. By not taking into account cultural, environmental, and educational differences, IQ testing was interpreted by eugenists to support extreme views. Criminality was generally considered a concomitant of feeble-mindedness, with genetic causality. It was claimed that immigrants from southern and eastern Europe were socially inferior due to criminal and defective genetic "stock."[1] For over two decades, eugenists actively endorsed legislation to restrict immigration, resulting in the 1924 Immigration Act which sought to limit nationalities not well represented in the United States in 1890, that is before the major wave of immigrants from southern and eastern Europe arrived at Ellis Island.[3]

Many eugenists advocated *sterilization* of "defective" persons. By 1931, compulsory sterilization laws had been passed by 27 states in the U.S. and by 1935, Denmark, Norway, Sweden, Switzerland, and Germany had similar laws. Notably absent from this list was Great Britain where eugenics originated but stopped short of compulsory sterilization. Most of these laws authorized sterilization of people thought to be insane, mentally retarded, or epileptic. Some also included habitual criminals and sexual deviants.

In 1927, the U.S. Supreme Court upheld the Virginia sterilization law in *Buck v. Bell.* This law was enforced for 48 years, between 1924 and 1972, during which over 7,500 Virginians were sterilized. Included were "unwed mothers, prostitutes, petty criminals and children with disciplinary problems."[2]

California was the state which led the way in eugenic sterilization. In the year 1927, sterilizations in California exceeded 5,000, which was four times greater than the rest of the entire world.[4] In the initial decades of the 20th century, California was near the top among states in wealth and education. In 1929, the personal income in California was $1,086 as compared to $306 in the South.[4] By 1900, California had built five mental hospitals and a large "Home for the Feebleminded." The first state institution for the mentally retarded in the South opened in South Carolina in 1920. California's first eugenic sterilization law was passed in 1909 followed by an expanded law in 1913. In South Carolina, the first and only law passed in 1935.

THE DEEP SOUTH, INCLUDING SOUTH CAROLINA

Compared to the remainder of the nation, the states of the Deep South (South Carolina, Georgia, Florida, Alabama, Mississippi, and Louisiana) enacted eugenic social policies later and sterilized fewer persons. In a 1995 book about eugenics in the Deep South,[4] historian Edward J. Larson speculated that lesser use of eugenic sterilization in the South may have been due to traditional beliefs in individual rights, religious objections (particularly by Catholics in Louisiana), less influence of so-called "progressive" leaders, or perhaps the relative paucity of medical scientists and scientifically advanced medical schools in the region. In 1900, the total value of scientific apparatus in all colleges and universities in the South was less than that of any one of a half-dozen institutions in the North. No university in the South offered a Ph.D. in chemistry during the first third of the 20th century.[4]

South Carolina was an interesting example of two strong-willed and influential professionals who took opposite sides in the matter of eugenic sterilization. B.O. Whitten, founding superintendent of the State Training School for the Feeble-Minded (now Whitten Village), was a strong advocate of eugenic sterilization. C. Fred Williams, superintendent of the South Carolina Department of Mental Health from 1915 to 1945 was a strong opponent.[4] The South Carolina institution for the feeble-minded was the first such facility in the Deep South, authorized under the leadership of Governor Richard I. Manning in 1918. This facility was promoted by eugenics organizations from the Northeast, the South Carolina Medical Association and the South Carolina Federation of Women's Clubs.[4] The intention was to segregate mentally retarded persons from the population for the good of the inmates and the remainder of the people. Admission requirements were minimal and qualitative. Eligible persons were considered to be unable to manage themselves or their affairs and incapable of learning to do so. Parents could admit their children and certain county or school officials could recommend admission. Any citizen could petition that someone be admitted; however, a physician, psychologist, and judge had to concur. The only facility was reserved for whites.[4]

Superintendent Whitten favored sterilization after training and before discharge; however, South Carolina was the next to the last state to adopt a sterilization law partly because of the consistent opposition of Fred Williams who held that there were environmental as well as genetic causes of mental illness.[4] After a number of failures to bring a eugenic sterilization bill through the General Assembly, freshman state Senator Strom Thurmond guided Whitten's bill through the Medical Affairs Committee in 1935. The bill was passed by both Houses and was signed into law by Governor Olin D. Johnston. The next year, Whitten was elected president of the American Association for the Study of the Feeble-Minded. Williams saw to it that only one patient in the large state psychiatric hospital was sterilized up until the time he retired in 1945.[4] After 1945, the psychiatric hospital began a modest program of sterilization under the 1935 law, reaching an annual high of 43 in 1956 and decreasing to single digits in the early 1960s.[4]

After World War II, North Carolina, Georgia, and Virginia led the nation in sterilization, performing three-fourths of the procedures in the entire country in the 1980s when there was a marked decline in sterilizations in other states.[4] The South Carolina sterilization law was repealed in 1985 under the leadership of the only female member of the Senate, Elizabeth J. Patterson, daughter of Governor Johnston, who had signed the bill into law 50 years earlier. She may have been influenced by the fact that her brother resided for two decades in Whitten Village.[4]

GERMANY

It was the German nation, including German physicians, who infamously radicalized eugenics despite Germany's acknowledged leadership in biomedical sciences and education. In the middle and second half of the 19th century, there was great progress in the life sciences in Europe, with Germany leading the way. In the 1890s, there were some 300 biomedical scientists in Germany, less than 100 in Great Britain, and very few in the U.S.[5] By 1933, when Hitler attained power, Germany and Austria had been awarded more than one-third of all Nobel Prizes—nearly as many as Great Britain, France, and the United States combined.[6]

From 1870 to 1914, an estimated 15,000 Americans sought training in German and Austrian medical schools because of their excellence and comprehensiveness.[5] The German medical education model included full-time professorships, teaching departments, institutes, teaching clinics, and hospital beds, all within a state-supported university complex. Graduate (residency) medical education and research were also included within this academic and professional structure.[7] In 1924, William H. Welch, one of the founding faculty of the Johns Hopkins Medical School, described German medical education as having "advantages for scientific and practical study never before attained and to this day hardly equaled."[5]

The Kaiser Wilhelm Institute for Anthropology, Human Genetics and Eugenics, opened in 1927, and by 1934, had trained 1,100 German doctors in "genetic and racial care." By 1932, one year before Hitler assumed power, formal courses in racial hygiene were taught in most German medical schools. In 1929, the German National Socialist Physicians' League was organized. By 1933, six percent of German physicians had joined this Nazi organization, the explicit purpose of which was to rid the German medical community of Jews.[3] By 1942, nearly half of all doctors in Germany had joined the Nazi party, a larger percentage than any other professional group.[3]

German sterilization law was adopted in 1933 with avid support by the American Eugenics Society. Ultimately, under the banner of eugenics, 350,000 to 400,000 Germans were sterilized, over one percent of the population.[3] In 1939, involuntary euthanasia, or "mercy killing," began first with 5,000 children followed by 200,000 adults, mostly patients in mental hospitals. In the 1940s, came the Holocaust, the systematic murder with intent to eliminate every Jew plus many Slavs, Gypsies, homosexuals, communists, and prisoners of war. Physicians played key roles in all these horrors, and some also conducted sadistic and cruel medical experiments on concentration camp prisoners.

Hanauske-Abel,[8] after extensively reviewing documents published in German medical journals in 1933, concluded that the complicity of German physicians and biomedical scientists with the deeds of the Nazi party was based more on enthusiastic volunteerism than on either social/political circumstances or coercion. Similar voluntary participation by Germans is the theme of Daniel Goldhagen's controversial 1996 book *Hitler's Willing Executioners: Ordinary Germans and the Holocaust.*[9] Evidence suggests that many German physicians autonomously set their own evil course both before and after 1933. In some respects, the medical profession even out paced the Nazi government. German doctors competed to fill sterilization quotas. Sterilization research and engineering rapidly became one of the largest medical industries. At least half were sterilized for "feeble-mindedness" diagnosed by intelligence tests. In 1937, the population became sufficiently alarmed by the vigor and extent of the medically run sterilization programs to cause the Nazi government to rein in the physicians.[8]

In 1939, the German euthanasia program accelerated rapidly. The T4 organization which ran the program billed for its services like any other health care provider and produced a large profit.[8] This practical experience of mass killing of humans provided a pilot trial of methodology later employed for huge scale annihilation management and technology used in the 1940s in the remarkably efficient death camps.

Germany, including its doctors, was hard hit by the great depression. From 1928 to 1932, the German gross domestic product decreased by at least 25 percent and unemployment rose from 0.75 million in 1928 to over six million in 1932. Average income of German physicians fell by 34 percent during the same period.[8] In 1933, about 17 percent of all German physicians were Jewish. Larger cities had higher percentages, including 40 to 50 percent of Berlin physicians. Within weeks of Hitler's assumption of power, Jewish physicians began to summarily lose their jobs and medical licensure, and by 1939, none were allowed to practice. These government decrees were public information and were reported as early as 1933 in the *Journal of the American Medical Association*. With their Jewish competitors gone, by 1935 German doctors' average taxable incomes had increased by 25 percent, outpacing improved lawyers' incomes which before the depression had been significantly higher than physicians.[8]

CONCLUSIONS

Eugenics theory and resulting social movements began over a century ago in Great Britain, flowered in the United States and Germany, resulted in serious injustice in the United States, and contributed to a massive moral calamity in Germany. Eugenics started with belief in genetic biological determinism and was implemented in progressive stages: (1) identifying a superior class of people, (2) labeling of certain persons and traits as genetically inferior and therefore polluters of the elite, (3) institutionalization of undesirables as scapegoats for perceived societal problems, (4) compulsory sterilization, (5) euthanasia, and finally (6) genocide.

The fact that these events happened in the near past is indisputable. The important question is why theories based on faulty science initially took hold among presumably well-meaning, influential intellectuals, followed by bad political choices which were supported with considerable fervor within the medical profession and among large numbers of educated people who believed in progress based on science. Among nation-states, it was Germany which used and misused eugenics the most. Germany was, at the time, acknowledged to be the most advanced nation in the life sciences and in modern medical education. In the United States, relatively wealthy and well educated California led the way. The much poorer Deep South lagged in scientific education and research, in placing those considered inferior in institutions and in compulsory sterilizations.

While it would be folly to conclude that the sciences upon which modern medicine is based and the scientifically based university model of medical education caused the problems associated with eugenics, there is little indication that faulty eugenic theories and policies were rejected or even retarded by mainstream medical science or practice. It is plausible that over-reliance on biased science and misapplication of scientific theory (scientism) in societies full of prejudices against "others," especially vulnerable minorities, contributed to moral wrongs in the name of eugenics, often on a large scale. Current enthusiasm for genetic medicine based on dramatic advances in science and technology offers a temptation to again authorize badly flawed practices in the name of neoeugenics. The history of eugenics also shows that individuals like C. Fred Williams in South Carolina can effectively use their influence to resist policies which are ill-founded and unjust, even when such policies are espoused by very influential persons and organizations. ❐

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EUGENICS IN THE SOUTH: THE CARRIE BUCK CASE*

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The recent passage of the 50th anniversary of the Nuremberg Code and the approach of the new millennium occasion a historical review of eugenics and its endorsement of compulsory and involuntary medical treatments for disenfranchised individuals. As discussed in an accompanying article,[1] one such "treatment" was involuntary sterilization. Over a 60 year span (1907-1970), more than 60,000 mentally ill and/or retarded persons were involuntarily sterilized in institutions around the United States.[2] While several states in the North, Midwest, and West had enacted sterilization statutes in the early part of this century, challenges in federal and state courts either struck down or delayed many of the laws. The legitimatization of eugenic sterilization in this country occurred in 1927 when the U.S. Supreme Court (*Buck v. Bell*) upheld Virginia's sterilization law as Justice Oliver Wendell Holmes proclaimed that "three generations of imbeciles are enough." In this paper, we provide a brief review of this landmark case which centered on a young woman from Charlottesville named Carrie Buck.

CARRIE BUCK'S STERILIZATION

The push for legislation supporting involuntary sterilization in Virginia began in the first decade of the twentieth century. Charles Carrington, the surgeon for the Virginia Penitentiary in Richmond, championed the cause of sterilization and proudly reported sterilizing inmates "to prevent procreation by confirmed criminals, idiots, imbeciles and rapists." In 1909, he spoke to the Virginia Medical Society and announced his intention to develop a bill to "require the sterilization of certain classes of our criminals" since "heredity is the greatest causal factor in crime."[3] Although that bill was endorsed by the Virginia Medical Society and passed the Virginia Senate by a margin of 20-8, it was defeated in 1910 by the House of Delegates.

Arguments for compulsory sterilization of the "feebleminded" and criminals continued over the next decade in Virginia. Dr. Joseph DeJarnette, the superintendent at the Western State Hospital (formerly the Lunatic Asylum) in Staunton, Virginia, was one of the most vocal proponents of sterilization. He repeatedly exhorted legislators to legalize the "sterilization of all weaklings" based on his interpretation of Mendelian and Darwinian principles.[4] He urged sterilization as a "cheap and effective" solution for the state's economic burden of the "unfit." Along with many of the eugenists of his time, DeJarnette firmly believed that alcoholism, venereal disease, prostitution, epilepsy, and mental retardation would disappear if procreation were halted through sterilization.

In 1924, Virginia passed its compulsory sterilization law. At that time, Carrie Buck was an 18-year-old inmate of the Virginia Colony for the Epileptic and Feebleminded. She was selected by Dr. Albert Priddy, the institution's superintendent, as the first woman to be sterilized under the newly passed law. The law was designed to involuntarily sterilize women of low intelligence but as later research has shown,[3,5] the proof of

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"feeble-mindedness" in Carrie and her family is nonexistent.

Carrie Buck's story is tragic. She was one of several illegitimate children of Emma Buck, but grew up with foster parents, J.T. and Alice Dobbs. As a teenager, she was raped by a relative of the Dobbs family. When a pregnancy resulted from the rape, Carrie was sent away by the Dobbs to have her baby at the Colony. Carrie's daughter, Vivian, was born in March 1924. She was adopted by the Dobbs family and attended elementary school in Charlottesville until her death at age eight from enteric colitis.

Proponents of the Virginia sterilization law chose Carrie Buck to test the application of that law. On its journey to the Supreme Court, this trial included a "who's who" of the eugenics movement. Expert witnesses included Dr. DeJarnette from Virginia, Harry Laughlin, the chief assistant (and later Supervisor) at the Eugenics Record Office in Washington D.C., and Arthur H. Estabrook, the Eugenics Record Office's vocal field worker. A self-described "Expert Eugenical Agent,"[6] Laughlin believed passionately in the inheritance of mental deficiencies and testified before legislatures nationwide. He had a reputation for tirelessly preaching "a conservative sterilization program" for the U.S. "aimed at cutting off the lowest one-tenth of the population".[7] In his deposition in Virginia, Laughlin observed that:

> "Generally feeble-mindedness is caused by the inheritance of degenerate qualities; but sometimes it might be caused by environmental factors which are not hereditary. In the case given, the evidence points strongly toward the feeblemindedness and moral delinquency of Carrie Buck being due, primarily, to inheritance and not to environment."[5]

The author of the model sterilization law on which the Virginia statute was based, Laughlin was later awarded an honorary doctorate for his efforts at creating eugenics sterilization legislation by Heidelberg University and pro-Nazi supporters in 1936. Incredibly, Laughlin accepted this "honor" as "evidence of a common understanding of German and American scientists of the nature of eugenics."[7]

The Carrie Buck case eventually made its way to the Supreme Court (*Buck v Bell*, 1927) where Chief Justice Oliver Wendell Holmes' famous declaration "three generations of imbeciles are enough" fueled the fires of the burgeoning eugenics movement across the country and the world. Holmes, then in his mid-80s, wrote:

> "We have seen more than once that the public welfare may call upon the best citizens for their lives. It would be strange if it could not call upon those who already sap the strength of the state for these lesser sacrifices...It is better for all the world, if instead of waiting to execute degenerate offspring for crime, or to let them starve for their imbecility, society can prevent those who are manifestly unfit from continuing their kind. The principle that sustains compulsory vaccination is broad enough to cover cutting the Fallopian tubes. Three generations of imbeciles are enough."

Analysis of the social atmosphere of that period and review of the particular testimony in the trial reveal that the true nature of this case was not about feeblemindedness, but about violations of moral norms. Steven Jay Gould says, "Her case never was about mental deficiency; Carrie Buck was persecuted for supposed sexual immorality and social deviance...Who really cared whether Vivian was a baby of normal intelligence; she was the illegitimate child of an illegitimate woman."[5]

Allegedly, intelligence testing was performed on Carrie and her mother prior to the trial with experts testifying their mental age was somewhere between seven and 10 years of age. Thus, successful documentation of "three generation of imbeciles" hinged on the infant daughter Vivian's mental state. During the trial, the critical testimony of Ms. Wilhelm, a social worker for the Red Cross, convinced the court that Vivian was feeble-minded based on her examination when Vivian was *six months old*!

> "It is difficult to judge probabilities of a child as young as that, but it seems to me not quite a normal baby...In its appearance-I should say that perhaps my knowledge of the mother may prejudice me in that regard, but I saw the child at the same time as Mrs. Dobbs' daughter's baby, which is only three days older than this one, and there is a very decided difference in the development of the babies. That was about two weeks ago. There is a look about it that is not quite normal, but just what it is, I can't tell."[8]

Vivian's elementary school records were discovered in 1983.[3] Vivian, in fact, received As, Bs, and Cs in school and was even placed on the honor roll in 1931 before she died the next year. Interviews with Carrie Buck in the early 1980s in Charlottesville revealed that although lacking social graces, she was "neither mentally ill nor retarded."[4] As a sad footnote, Carrie's sister, Doris, had also been secretly and involuntarily sterilized during an operation supposedly for "appendicitis."[5]

Thus, "there were no imbeciles, not a one, among the three generations of Bucks."[3,5] However, based on the overwhelming endorsement in *Buck v. Bell*, compulsory sterilization in Virginia continued until 1972 with over 8,000 sterilizations performed as its infamous legacy.

CONCLUSION

The tragic story of Carrie Buck and the subsequent Supreme Court ruling of *Buck v. Bell* provided American states with justification for eugenic sterilization. Over the next few years, two dozen states lined up to pass similar legislation. Although informed by an underlying element of humanitarian sympathy, the eugenics movement in this country was fueled primarily by society's appetite to control public dangers and social costs. The public felt that restrictive measures for the mentally ill, infirm, and criminals were justified since such measures would benefit society. Ardent believers in eugenics in the United States and the world lost sight of the value of individual liberty, including reproductive rights for women and civil rights for the handicapped and disenfranchised. Many in the medical profession were swept up by the eugenics movement and the related terrors and tragedies of euthanasia and human experimentation.

We can learn valuable lessons from Carrie Buck and the thousands of other unfortunate people who lost their dignity, fertility, and freedom in this country. As discussed elsewhere in *The Journal*,[1] ethicists, scientists, and the medical profession must urge cautious consideration in the interpretation and use of the new explosion in genetic information and of public policies designed for the "social good." ❐

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ETHICS AND GENETIC TESTING

STUART SPRAGUE, PH. D.*

In a short piece in honor of his brother, Bernard, Kurt Vonnegut, Jr., writes this, "I learned from his reaction (to the dropping of the atomic bomb) that not all new knowledge is necessarily good, an opinion seldom held by scientists and technicians. Many years later, I would propose in a speech at M.I.T., with Bernard's approval, that all such persons, upon graduation, take a sort of Hippocratic oath, promising to do no harm, promising not to help others do harm and so on. No one was interested. All the good jobs were in warfare."[1]

As he often does, Vonnegut has succinctly put an important moral dilemma in perspective. He stands in a long line of artists who have given us insight on this subject. Shakespeare, Wagner, Huxley, Updike, and Tolins are only a few who have given us pause to think deeply about what to do with new knowledge. The dramatic advances in knowledge of our genes raise the same issue for us at century's end.

Dr. Richard Sosnowski, writing in this journal, has already made an important contribution to the discussion of the ethical issues surrounding genetic screening.[2] The principles and values he uses to justify his conclusions are ones which have a long history in medical ethics, and the conclusions he draws are all relevant and appropriate. Giving autonomy, confidentiality, and informed consent preeminence in the moral discussion is only the first step, however. Important practical issues remain. Whether to submit to a test and how to interpret and make use of the results are not always easy questions. The basic moral affirmations above, however, are never in doubt.

PRACTICAL ISSUES

One category of practical issues which raises important moral concerns is the use of genetic test results by persons other than the patient and physician. Clearly, the patient may share these results with anyone. More difficult is the question of whether genetic test results may appropriately be shared when the patient does not know about it or objects. In such instances, the physician who requested or performed the test will be faced with a moral dilemma. Several examples will illustrate.

We do not object when detectives dust a crime scene looking for fingerprints as evidence. Will we have the same feeling about gathering genetic material which can be used to establish identities and characteristics of perpetrators and victims? Can the results be compared with test results already done? Must notice be given of such comparisons, or can they be done in secret? Can further tests be compelled to make comparisons and establish guilt, innocence, or some other matter under discussion?

Physicians who have the results of a genetic test which have implications for persons other than the patient also face a moral dilemma. Should family members who may share the genetic characteristics be told? A subcommittee of the American Society of Human Genetics recently issued a lengthy statement on the subject with a series of carefully reasoned recommendations.[3]

Persons or corporations about to make insurance contracts with individuals, in which their money will be at risk, may wish to use the results of genetic tests already performed or compel additional testing to suit their needs. One of the foundational principles of our capitalist system is that parties to a contract have a right to full disclosure of all information which will have an influence on

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the costs associated with the contract. We have no objections to life insurers doing a physical exam before writing a policy in which their resources will be at risk. Casualty insurers may inspect property which they propose to insure and collect data which helps them asses the risk they are about to underwrite. Health insurers or employers may desire to obtain genetic information which details the risk they are undertaking when writing health insurance in which their resources are at risk. This could be another example of secret use of test results. It may also, however, include examples in which the patient feels coerced to submit to testing or to consent to release of results because of economic or social pressures.

THE SPECIAL CASE OF INSURANCE

Autonomy cuts two ways in the last example. There are two parties to the contract and both invoke autonomy to protect their interests. Both assert the right to have access to and determine the use of information. If we submit the competing claims to arbitration through moral arguments, the right to control information having to do with such a personal matter as one's genetic makeup would seem to take precedence over another's prudence as to financial investments. Others would perhaps argue, though, that in spite of the strong claim one has to information about one's own body, without the ability to obtain full disclosure of risk, our financial system would be threatened. A utilitarian case could be made for compelling disclosure of the results. Persons who feel strongly that they should not share the results or their own tests could simply choose not to participate in insurance pools.

Insurance is the mechanism by which we pool current earnings of a group to pay the high cost of individuals who need care. When that is a mutual or non-profit arrangement, the premiums can be set by actuarial estimates, and any profit or loss to the group can be absorbed by or shared with the group in future premiums. When the profit or loss goes to a group of shareholders or back to the providers as a bonus, the moral questions expand.

The key moral issue is how groups are formed. How does one gain admission to a group being insured? On what basis can one be expelled from a group? Can one be in a group but not receive the same benefits as all other members of the group? When we add the dimension of sanctioning the making of profit from taking insurance risk, the issues become even more clouded. Obviously, one who is skilled in forming groups of healthy patients can make a handsome profit. Using a variety of data to form such groups, including the results of genetic testing, enhances the profit potential. When profit is the accepted goal of such activity, it is hard to argue that information which affects profit may legitimately be withheld from those whose money is at risk.

This discussion is a strong argument for the moral preference of a single payer system for health care. In that case, there is only one group. All pay premiums, and all receive benefits based on medical need. In such a system, there is no need to share the results of genetic testing beyond the patient and physician. Appropriate diagnoses can be made and therapies attempted using the resources of the group. There may be some discussion of what constitutes medical need, which would influence funding decisions. This discussion, however, could be done on an open basis and with objective criteria which consider the interests of all. No one would need to or be asked to share results of genetic testing with anyone except his/her physician.

We don't live in that world, at least in this country. What interim ethic can we propose which will minimize the harm within the system which currently operates? Legislation which forbids consideration of preexisting conditions is a positive step. It seems to remove the incentive to insist on disclosure of risk factors like genetic predisposition. There are still, however, ways to skew the process by which groups are assembled for insurance purposes. Identifying other more public criteria to select patients and the use of marketing to assemble persons in statistically predictable categories can be used to mitigate against having to pay unexpected claims. When profit is at stake, creativity rises to the occasion.

CONTRIBUTIONS OF RELIGION TO THE DISCUSSION

Religious concerns also arise in discussions regarding the use of genetic testing. Exercising control over nature has a long precedent in Western religion; genetics is no exception. The biblical mandate to have dominion over the earth has engendered a long-standing discussion of the use of human capacities in the natural world to effect change which is to human benefit. Science has maintained since the Enlightenment that its efforts in this regard are value free. Starting with the separation of fact and value, experimenters have presumed that the empirical work of describing and manipulating the natural world not only proceeds in the realm of fact alone, but also depends upon the exclusion of all reference to values in the process of discovery.

My own view is that this in not the case. From the moment the hypothesis is envisioned and through the process of collecting data and drawing conclusions, values permeate the process. Clearly, there is bad science, and scientists must constantly guard against the intrusion of prejudice, personal blind spots, and unwarranted social pressures into their scientific work. But to claim that the process is value free is hyperbole. In fact, Wolpe claims that the character of science as it developed in the West was shaped by religious values and gave rise to an approach to scientific investigation that is different than that which arose in the East.[4]

We must acknowledge that technology, such as genetic testing, is not simply a solution to problems but is a problem, itself. Ten Have argues that the momentum behind the application of knowledge as soon as it can be used in a practical way has led to the assumption that, "technology is not a problem, but rather itself a solution to problems."[5] Such an assumption, he argues, leads to a willingness to use technology with a presumption that its fruits will always be helpful.

Wolpe challenges that assumption on religious grounds. His argument centers around a criticism of genetic essentialism. The postmodern era has led to a challenge to the notion that there is an essential selfhood. Even religious notions of selfhood as an essential quality of all human beings are in flux. This has led to a certain sense of uneasiness about who we are. Wolpe argues that, "the genetic self offers an answer to the uneasiness of the postmodern self."[4] Technology has responded to our uncertainty by allowing us to describe in great detail what that genetic self is. It has also given us ways to check ourselves against that standard and holds out the prospect that we can modify ourselves to conform to the standard, or some version of it that we may idealize.

Wolpe also argues that the postmodern self tends to see all traits, "in terms of health and illness, normalcy and aberration."[4] In the same way that such measures as standardized tests with paper and pencil tell us who we are, the results of genetic tests tell us whether we are normal or not. Failures or disappointments are explained in this way. Positive results tend to reassure us that all is well. Wolpe suggests that such a view relieves us of responsibility to know ourselves through hard won self knowledge and allows us to believe that we can be fixed with technology. Thereby the uncertainty posed by the postmodern era can be relieved satisfactorily.

I believe that Wolpe's analysis of the situation is a helpful one. His prescription for the problem, however, is not as clear. It relies on what might be called the "Baby Bear's Soup" approach. **Not too much technology, not too little technology, but just the right amount of technology is what we need**. We may not be able to avoid that approach altogether. He does suggest that the Jewish experience offers such a balanced perspective. It is one in which the core ideal of the embodied self allows this balance. Since the body is not the sole seat of selfhood, the genetic self is not defining of all that we are. It can be manipulated without altering any essential qualities: not too little technology. This process must always, however, be in tension with the divine: not too much technology.[4]

While there is a stream of Christian thought which sees divine control over natural processes as absolute, this is not the full extent of Christian thinking on the matter. Mark Hanson has shown that there is diversity among Christians in their approaches to the understanding and use of genetic material. In the end, he also suggests an approach which is a middle way. Religious traditions should be thoroughly familiar with the technologies and willing to sound an alarm when they have overreached their proper place.[6]

I have always been uncomfortable with simply landing in a middle position on a tough moral issue. Though there is a long noble history of such an approach, going back at least as far as Aristotle, that is small comfort. The key is for individual scientists to be willing to submit their discoveries to some sort of ethical framework before plunging ahead to use them. As their ability to explain, test, and alter increases, there will be the need for more and more dialogue about the implications of their work.

CONCLUSION

The real culprit is not knowledge, but greed. The strongest incentive to misapply knowledge is financial gain. If a moral framework were accessible and accepted, scientists would be more willing to record their knowledge but not develop or apply technology in ways that were considered unacceptable, regardless of the financial consequences. When there is uncertainty or disagreement on the moral boundaries, the market takes over as a moral force for making decisions.

Richard Gunderman has recently offered a distinction between self-interest and greed.[7] In the case of genetic testing, it would seem that his ideas could be used to make a meaningful distinction. Those scientists and clinicians who use their skill to diagnose and treat genetic illnesses may self-interestedly expect to be able to earn a living at that task. They have marketable skills which can be used to benefit humanity. Those persons who simply put capital at risk in insurance with the hope of being able to use genetic testing to segregate from their insured pool those individuals who may have genetic illnesses which are expensive to treat, would seem to be motivated by greed. Genetic testing would certainly be of economic value to these entrepreneurs, but it would be bad social policy to allow that to happen. In this case, both moral and religious inclinations lead to a similar conclusion. Bernard Vonnegut was right when he warned us that not all new knowledge is necessarily good. ❐

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MEDICARE UPDATE

Avoid Provider Number Claims Errors: Many practices are calling into the service center with questions on the correct provider number to be filing on the HCFA-1500 claim forms. The incorrect number on line 17a and block 33 is causing denial of many claims. A simple explanation of the three numbers and a review of how to use them are given below. Medicare hopes this alleviates some of the unwanted confusion and avoids unnecessary denials.

Each provider is issued a Unique Provider Identification Number (UPIN) by Medicare. The UPIN consists of a letter plus five numeric digits. An example is A12345. Each practice also has a group number. This four-digit number identifies a provider as part of a larger group. A provider may be asked for their PIN, which is simply the UPIN plus the group number. An example is A123459999.

In block 17a of the HCFA-1500 form, it asks for the ID number of the referring physician. On this line, the UPIN for that physician should be entered. On line 33 of the HCFA-1500 form, the PIN should be entered at the bottom, identifying the physician and the practice. The ONLY exception is if more than one physician's care is submitted on the same claim form. In this case, the group number is listed in line 33 and each physician's PIN is inserted on line 24k beside the procedure he/she performed.

ICD-9-CM Updated Codes: You may begin using the updated ICD-9-CM codes for claims submitted on or after October 1, 1998. Old and new codes will be accepted from October 1 through December 31, 1998. Beginning with dates of service on or after January 1, 1999, the new codes must be used. It is important that you use the most recent version of the ICD-9-CM coding book so you will code to the highest level of specificity.

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SCMA WORKSHOPS

EXPLORING CPT CODING
October 6, 1998

Designed for medical staff new to CPT, this full-day course presents an overview of the techniques and conventions of procedural coding. *Register by September 25, 1998. Workshop: 9:00 a.m. - 4:00 p.m.; Registration: 8:30 a.m.; Charleston, Fulton Lane Inn*

EXPLORING ICD-9-CM: A VOYAGE OF DISCOVERY
October 7, 1998

After participating in this full-day seminar, participants will have mastered the principles of diagnostic coding and will be able to quickly locate the right codes, entering these codes properly on HCFA-1500 claim forms. *Register by September 25, 1998. Workshop: 9:00 a.m. - 4:00 p.m.; Registration: 8:30 a.m.; Charleston, Fulton Lane Inn*

(Continued on page 3)

INFORMATION TO PHYSICIANS ABOUT REQUIRED CHILD ABUSE REPORTING

The recent South Carolina Supreme Court decision in *Whitner v. South Carolina* has raised many questions about the exact reporting requirements South Carolina law places on physicians. Unfortunately, there are no easy answers. From the physician's viewpoint, clinically based decisions must be made based on the broad framework found in the law.

South Carolina Code section 20-7-510 requires physicians and others to report “any information which gives [them] reason to believe that a child’s (or a viable fetus’s) physical or mental health or welfare has been or may be adversely affected by abuse or neglect.”

“Abused or neglected child” means a child (or viable fetus) whose death results from or whose physical or mental health or is harmed or threatened with harm. (S.C. Code Section 20-7-490 (2).

“Harm” to a child's (or viable fetus’s) health or welfare can occur when the parent, guardian, or other person responsible for the child's welfare:

> (a) inflicts or allows to be inflicted upon the child (or viable fetus) physical or mental injury,.... (S.C. Code section 20-7-490 (3).

Reports of clinical facts which fall into the category of “harm” defined above are **mandatory!** Failure to report such occurrences to the Department of Social Services (DSS) or law enforcement can result in criminal conviction for a misdemeanor and up to six months in jail, a $5,000 fine, or both.

Additionally, civil liability may be incurred for failure to comply with the reporting statute where a child or viable fetus is injured or otherwise sustains damages if the jury determines that failure to report was the proximate cause or a contributing factor to the injuries or damages suffered by the child or viable fetus. It is not clear whether professional liability insurance would cover the costs of defending such an action or whether professional liability insurance would pay any damages awarded by a jury.

Physicians should carefully analyze cases that potentially meet the definition of “harm” from a clinical standpoint. If you feel that the clinical facts about a particular patient's case meet the definition, you should report the matter to DSS or law enforcement. Examples of clinical issues that likely meet this definition are the inappropriate use of drugs (both legal and illegal), excessive use of alcohol or tobacco, or exposure to physical violence or environmental hazards that threaten the child or viable fetus. If you feel the clinical facts do not meet this definition, you should not report. You should make careful notes in the record about the issue, indicating why you feel the definition is not met.

Additionally, any death of a child or viable fetus under circumstances consistent with the definition of harm should be immediately reported to the medical examiner or coroner.

MARK YOUR CALENDAR

The SCMA’s Annual Meeting and Scientific Assembly is scheduled for April 29-May 2, 1999, at Charleston Place Hotel, Charleston, South Carolina.

PHYSICIANS CARE NETWORK UPDATE

Physicians Care Network (PCN) now has 6,389 participating physicians, 662 participating ancillary providers, and 83 participating hospitals. PCN currently has 73 contracted groups and 20 groups pending for contracts with 55,505 covered lives. PCN will provide more information as contracts are received.

The following groups have terminated with PCN:

- Fennell Container, 8/1/98

Don't forget to notify PCN when you have a tax ID number change, address change or when you add a new physician to your group. Early notification will ensure provider directory accuracy and prevent claims payment delays.

If you have questions about PCN, please contact Cindy Osborn, Network Coordinator, PCN, at (803) 798-6207, extension 257 or statewide at (800) 327-1021. You may also send an e-mail message to cindy@scmanet.org.

SCMA WORKSHOPS (continued)

CPT: A COMPREHENSIVE STUDY
October 8, 1998

In this intensive full-day course tailored to meet the needs of participants, experienced coders will study the techniques and conventions of procedural coding. *Register by September 25, 1998. Workshop: 9:00 a.m. - 4:00 p.m.; Registration: 8:30 a.m.; Charleston, Fulton Lane Inn*

ICD-9-CM: A COMPREHENSIVE STUDY
October 9, 1998

In this full-day seminar, experienced coders will review and explore the complexities of diagnostic coding. *Register by September 25, 1998. Workshop: 9:00 a.m. - 4:00 p.m.; Registration: 8:30 a.m.; Charleston, Fulton Lane Inn*

SERVICE EXCELLENCE
October 20, 1998

Your medical practice exists only because of patients and physician referrals. From that initial phone call through the process of clinical care, it is an attitude and philosophy of service excellence that will ultimately determine patient satisfaction. Facing the realities of delivering your medical practice's services in the 1990s, it is your responsibility to ensure you do everything possible to build your patient base, keep patients returning for their care, and properly serve your network or referring physicians. *Register by October 9, 1998. Workshop: 9:00 a.m. - 12:00 p.m.; Registration: 8:30 a.m.; Columbia, Clarion Town House Hotel*

USING THE INTERNET TO ENHANCE YOUR PRACTICE
October 29, 1998

The future is now! The time is near when you will need to understand the Internet in order to practice medicine effectively and efficiently. This program, specifically designed for physicians and practice administrators, will show how you can use the Internet to benefit your practice and your patients. *Register by October 19, 1998. Workshop: 9:00 a.m. - 4:00 p.m.; Registration: 8:30 a.m.; Columbia, Clarion Town House Hotel*

Space in each program is limited, so be sure to register early. *If you have any questions, please contact Melissa Hamby in Columbia at 798-6207, extension 253, or statewide at (800) 327-1021, or by e-mail at melissa@scmanet.org.* ❐

WOMEN IN MEDICINE MONTH

September is Women in Medicine Month. The number of women physicians continues to show steady increase since 1980, when just over 11 percent of physicians were women. In 1996, women accounted for 22 percent of the total physician population, and they represented more than 35 percent of all residents/fellows and 42 percent of all medical students. At the end of 1996, there were more than 157,000 women physicians. ❐

SUPPORT OUR FUTURE PHYSICIANS

Although the weather is just beginning to cool down, many physicians' and physician groups' thoughts are turning to the holiday season and ways that they can express their thanks to those who have contributed to the growth of their practices during the past year. Some physicians will give hams, while others will give the ever-popular fruit basket or box of chocolates. Many nutritionists agree that the average American will gain seven pounds during the holiday season, and these extra pounds don't normally disappear with the beginning of the new year. The South Carolina Institute for Medical Education and Research (SCIMER) has an alternative way you can express your gratitude to others during the upcoming holiday season.

Instead of giving the gifts mentioned above, why not support our future physicians? SCIMER suggests you make a tax-deductible contribution to support our scholarship program for medical students. In the next month, you will receive a flyer detailing our Season's Greetings program, which will allow you to support our future physicians and help increase the number of scholarships we can offer to the medical students. The Season's Greetings program allows you to give a contribution to SCIMER in someone else's name. In return, SCIMER will send a season's greetings card to that person in recognition of your gift.

Presently, SCIMER awards 14 scholarships annually to students from the Medical University of South Carolina and the University of South Carolina School of Medicine. SCIMER scholarships have made it possible for medical students to buy the books they need, avoid borrowing more money at high interest rates, or repair their seven or eight-year-old cars.

Remember to look for our flyer in October about the Season's Greetings program and pledge your support. Today's medical student is tomorrow's physician who will be dedicated to the health of South Carolinians in the coming years.

1998 BILLING MEDICAL SERVICES PROVIDER MANUAL

The 1998 Provider Manual is a full revision of the 1997 fee schedule. New maximum allowable payments (MAPs) are based on 1998 CPT coding, HCFA's 1998 relative value units, and an updated conversion factor. The 1998 manual covers services for physicians of all specialties, physical therapists, chiropractors, and psychologists and includes a new section for supplies and durable medical equipment.

All updates and changes were effective September 1, 1998. Copies are $50 each, plus $2.50 sales tax. The price includes shipping, handling, and the forthcoming 1999 CPT update. *For more information about the manual or to place an order, contact the Workers' Compensation Commission at (803) 737-5700.* ❐

SOUTH CAROLINA CHAPTER AAP PRESENTS AWARDS

The South Carolina Chapter of the American Academy of Pediatrics (AAP) honored four distinguished South Carolinians during its Annual Scientific Meeting at Hilton Head last month. The chapter presented the following awards:

- *John G. Felder*–Child Advocate of the Year for his contributions to the health and well-being of South Carolina's children and for his achievements on behalf of these children.
- *Tom L. Austin, MD*, of Columbia–1998 Career Achievement Award for his superior accomplishments in the field of medicine.
- *William G. Taylor, MD*, of Columbia–President's Award for his outstanding service to the chapter and its activities.
- *Ben Stands, MD*, of Columbia–special recognition for his untiring effort on pursuing the chapter's "Anti-Smoking Campaign."

Charles W. Linder, MD, AAP District IV Alternate Chairperson, presented the South Carolina Chapter of the AAP with the AAP Special Achievement Award. ❐

ETHICAL ISSUES IN CLONING AND EMBRYO RESEARCH*

WILLIAM J. BUTLER, M. D.**
JOHN M. ROBERTS, M. D.

In February 1997, Ian Wilmut and his colleagues at the Roslin Institute at Edinburgh, Scotland, announced the production of a viable lamb from fetal and adult mammalian cells.[1] The lamb, named "Dolly," in deference to its derivation from an adult sheep mammary gland cell, stimulated both worldwide interest and concern. Sensational alarms and warnings of eugenic doom in some cases preempted a rational scientific and ethical debate regarding this exciting new technology and its implications for the future. Such rational debate is predicated on an understanding of the science of "cloning," the larger issue of embryo research in general, and the ethical issues raised by the application of these technologies.

Cloning, whether by somatic cell nuclear transfer or true dedifferentiation of mature cells to totipotent cells, raises numerous ethical issues, including the moral status of such tissue and how it must be treated. These issues have been explored from philosophical, theological, and political perspectives in the debate over the use of preimplantation embryo tissue without clear consensus.

Dolly was the product of somatic cell nuclear transfer. The process involved obtaining a differentiated mammary cell from an adult sheep, inducing a state of quiescence by starving the cell and causing an arrest in the G0 phase of the cell cycle. The nucleus was removed from that cell and placed into an enucleated oocyte. Fusion of the donor cell and the enucleated oocyte was induced by an electrical charge with activation of cell division. The significant advance achieved by Dr. Wilmut was the use of the nucleus from an adult differentiated cell. Cells from adult organisms have differentiated to specific functions and lack the capacity for development into a full organism. Apparently, the induction of a quiescent G0 phase in the adult cell nucleus allowed it to be reactivated by factors in the oocyte cytoplasm which resulted in expression of developmental genes and the growth of an embryo. Prior attempts at so called "cloning" have utilized embryonic cells which still retain the potential for full development. This was the case with the report by Drs. Hall and Stillman that won the general program prize paper at the American Fertility Society meeting in 1993.[2] These researchers obtained polypoid (nonviable) embryos and separated the blastomeres (cells) which were then encased in artificial zona pellucidas and allowed to grow in culture. These totipotent cells developed into embryos in the laboratory. Although the headlines regarding this experiment also received significant notoriety, the process described actually was artificially-induced identical twinning, not cloning. Cloning of prize animal embryos is commonplace but also involves use of embryonic totipotent cells.

An argument can be made that true "cloning" is not yet scientifically possible. Cloning has been described as the production of a genetically identical organism from a cell taken from a mature fully-developed organism. Dolly required use of an enucleated oocyte and, therefore, was not true cloning. There is even a possibility that the nucleus was not obtained from a mature differentiated mammary cell, but instead could have been taken from a totipotent stem cell or even a circulating fetal cell as the donor sheep was pregnant at the time of the biopsy of the mammary tissue. This may be the reason why researchers, including Dr. Wilmut's team, have been unable to duplicate the success of Dolly. The current state of technology requires the production of an embryo in vitro as a basis for reliable cloning, given the current inability to replicate the success of somatic cell nuclear transfer. Therefore, embryo experimentation is a requirement for both current work and future advancement in this field. Is the use of totipotent tissue, such as an embryo, morally acceptable, thought, and if so, under what circumstances?

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In a recent issue of *The Journal of Medicine and Philosophy* devoted to "The Status of the Embryo and Policy Discourse," Professor Lisa Sowle-Cahill wonders if "research on technologies for targeting specific genetic information 'count' as creating an embryo? Is all research on the cloning of human cells morally questionable because it must begin with a cell whose DNA has the potential to become an embryo?"[3] Indeed, reflection on the experiences of the medical experiments done in German concentration camps or the syphilis experiments at Tuskegee has recently prompted the Council for Ethical and Judicial Affairs of the American Medical Association to prohibit the use of information generated by research that would use humans as a means and not an end.[4] Assessing the moral status of a fertilized ovum and embryo, or a fetus has proven to be difficult and divisive, especially in our pluralistic society. How, then, do we decide?

Thomas A. Shannon, Ph.D., notes that, as a society, we treat the fetus in different ways according to the context. As the desired object of artificial insemination or the beneficiary of intrauterine surgery, the developing human embryo is experienced as valuable and significant. Tissue from preimplantation embryos is also perceived as valuable, but more for its use in alleviating certain diseases, such as Parkinson's, or in answering important research questions. Its value here is in the good it can do for others. Consequently, it is not valued as a moral subject, but as an object at the disposal of others. Similarly, prenatal diagnosis may be for the benefit of the fetus, if defects can be corrected, or of the parents to facilitate decisions about continuing the pregnancy. Even the abortion debate that asserts the mother's right to privacy is greater than any subjective right of the fetus until the time of viability. Faced with this moral relativism, Shannon acknowledges the preimplantation embryo as human life, but not as an individual until totipotency is lost and differentiation begins...around day 14 when the primitive streak develops.[5] Until an entity is an individual, it cannot be a person, and therefore, cannot have the moral status attributed to persons.

Reviewing the work of the Human Embryo Research Panel, Carol A. Tauer, Ph.D., acknowledged the political aspects of determining public policy on embryo research....aspects that may have given more weight to the opinions of the scientists, clinicians, and ethicists on the committee than to broad public opinion.[6] It was the consensus of the committee that the preimplantation embryo was not a full human subject and did not merit full protection morally or legally. Because it had a limited moral status, some types of research that are not otherwise permissible with full human subjects could be morally acceptable. Here again, the individuation begun at 14 days with the development of the primitive streak was significant because prior to that the embryo is not a distinct individual and hence, not a person. Also, prior to that, there is no neural tissue, and without neural tissue, the embryo lacks "even the possibility of sentience and most other qualities considered relevant to the moral status of persons." Although not attributed the full moral standing of persons, the specialness of developing human tissue was recognized in policies that would protect embryos from being treated as property, thus devaluing and disrespecting human life.

Another member of the panel, Patricia A. King, J.D., argued that complete consensus on the moral status of the embryo wasn't possible. However, she states "significant agreement on limited areas of social practice that is supported by diverse but overlapping moral frameworks also provides a moral foundation for standards that guide social conduct. Despite intense disagreement about the moral status of the embryo, a policy grounded in overlapping consensus is feasible for human embryo research and should be encouraged."[7] A range of values, such as the facilitation of human procreation, the advancement of applied scientific knowledge, the reduction of human suffering, and the protection of vulnerable persons from coercion and exploitation would provide the moral ground of human embryo research. As discussion continues, people may arrive at similar policy conclusions for dissimilar reasons but in the process, greater consensus is built in the general public.

Carson Strong, Ph.D., advocates a consequentialist argument for "conferring" moral status on pre-embryos. He notes two different senses of the term "person." One can be a person in the descriptive sense, by possessing self consciousness, the capacity for communication, rational thought and action, and an ability to profess values and moral agency. One can also be a person in the "normative" sense of having full moral standing. This moral standing may be intrinsic because of some inherent characteristic of an individual, or conferred for reasons that are felt to be justified. For Strong, these reasons seem most justified from a consequentialist standpoint. It is better for society as a whole to care for infants because they, in turn, grow up to be healthy adult persons who care for others in the society.[8] Moral standing may also be justifiably conferred on beings not yet rational from a contractarian viewpoint when doing so would prevent harm to the interests of rational agents. The overall degree of similarity that an individual has to the paradigm of human persons is also significant to the consequentialist argument. Attributes such as the potential to cause self-consciousness, viability, sentience, having been born, physical appearance, and social role can combine to increase the justification of conferring moral status...the more attributes a being has, the greater the justification. Without relying on a single characteristic, the developing fetus has greater moral rights conferred on it as attributes of the full human paradigm are acquired. Strong argues some weak moral standing may be conferred to pre-embryos and factors this into the consquentialist moral calculus of policy making. Because the initial moral status of the embryo is low, Strong feels that parents ought to have dispositional authority given their greater personal right of procreative authority. Regarding pre-embryos as property seems inconsistent with the idea that at least some degree of respect should be given to them. However, the moral rights of the pre-embryo do not outweigh the rights of existing persons who could benefit from the knowledge gained by research on pre-embryos. "Thus, respect for pre-embryos does not require that we refrain from creating them for research purposes, provided the research has sound scientific design, is conducted with the informed consent of those donating the gametes, and promises to yield valuable information."

Although persons attributed full moral status may benefit from the knowledge gained by experimentation on embryos, is that benefit outweighed by the harm done to us as a moral community by such actions? Theologian William Werpehowski, Ph.D., suggests that the context of moral discernment is highly influential in determining whether full moral status begins with conception or with individuation. Viewed from a community context, the fertilized ovum is now distinct in that it is no longer information or material from mother or father but a unique combination. The pre-embryo is new life—vulnerable and needy. In the context of the covenant between mother and fetus, the proper emotional and moral responses are respect for life and unconditional love. "Naked, vulnerable equality, and the helplessness which we human creatures share with one another mark our condition."[9] Our response to that defines us as a community and as parents, and ought to be one of welcoming children. Experimentation on pre-embryos is, therefore, wrong when viewed from this context.

With compelling arguments both for the special nature of human life from the moment of conception and of the lesser moral status of this tissue prior to differentiation, those charged with formulating public policy seemed to rely more heavily on what we know scientifically. In 1994, a NIH Human Embryo Research Panel examined the issue of the permissibility of embryo research. They acknowledged the difficulty and potential impossibility of reaching a true consensus for lack of a single methodology for ethical analysis and the difficulty of reconciling various theological positions. However, they were able to come to some recommendations based on some intrinsic physiologic criteria used as markers for individuation of the embryo. Any specific developmental stage that is selected is an arbitrary division within the continuum of development. This development from gamete to zygote through the process of compaction and differentiation and growth of the morula and blastocyst encompasses a stage that has been termed the pre-embryonic period. The pre-embryonic stage ends at 14 days with development of the primitive streak in the conceptus. The primitive streak marks the first development of neural tissue and was selected as a defining stage of development using the rationale that, as long as the embryo possessed no neural tissue, it lacked even the possibility of sentient or conscious life and, therefore, its moral claims might be outweighed by the needs for research. This did not assert that, subsequent to this stage, the embryo was a human being, but only that, prior to neuralation, it was definitely not a human being. It is indisputable that the pre-implantation embryo is a living entity that engages in cell division and metabolism. However, although it has the potential to develop into an independent human being, it is at that point in a dependent relationship. The Human Embryo Research Panel concluded that the preimplantation embryo has a special status, but "does not have the same moral status as an infant or child" and, therefore, some types of research not permitted on human beings may be ethically permitted up to 14 days' development.[10] The panel recommended funding of research on pre-embryos, including creation of embryos for research, but this was never initiated because of a ban on federal funding.

The National Bioethics Advisory Commission's report in 1997 addressed the specific issue of cloning with regard to somatic cell nuclear transfer. Their conclusion was that it is morally unacceptable to attempt to create a child using somatic cell nuclear transfer. Their reasoning included that with the current state of scientific knowledge, this would involve an unacceptable risk to the fetus or potential child. This conclusion was based primarily on the difficulty encountered in the creation of Dolly, with 277 embryos created but only one successful offspring, and the ongoing inability to duplicate that single success. The Commission recommended the continuation of the current moratorium on the use of federal funding to support embryo research or cloning and a voluntary moratorium on private finding. They also recommended federal legislation to prohibit any attempt at cloning, but with the important proviso of a sunset clause requiring review in three to five years because of the continuing advancement in scientific knowledge. Another recommendation was that care be taken in this legislation so as not to prohibit legitimate scientific research in areas such as cloning of DNA and cell lines, as opposed to individual human beings.[11] Other countries have passed outright bans on cloning. Nineteen European nations have signed a treaty to ban human cloning, but there were two abstentions. Germany abstained because of complaints that the treaty did not establish a strict enough prohibition against such research, whereas Great Britain felt it was too restrictive and prohibited necessary and appropriate research. Eventually, the State of South Carolina proposed legislation (Bill #3617) to outlaw "cloning."

The debate about cloning has been emotionally charged by proposals of disaster scenarios such as the production of a lower class of human being who could be used as slaves or cannibalized for spare parts. More reasoned objections have included the potential for production of multiple clones for sale with one embryo having been raised to determine and predict the appearance, intelligence, and other abilities of the clone. The potential for psychological harm to children produced through cloning and the undermining of family and societal values with human beings being treated as objects has been a common theme. The "slippery slope" argument that such work will inevitably lead to a eugenics nightmare has also been proposed. Often lost in this debate are the very real, current, and potential benefits of this technology. There are already significant improvements in livestock generated by cloning of prized animal embryos. The potential for preservation of endangered species is an obvious next step. Current work has produced cloned transgenic animals which can produce human gene products such as human serum albumin. Basic research on the process of cytoplasmic control and regulation of nuclear gene function could provide understanding of the processes of cellular differentiation and aging. Control of somatic cell differentiation could lead to the production of replacement organs, skin, blood cells, or even neural tissue and circumvent the concern that cloning of entire individuals could be used as a source of spare organs.

The authors feel that a reasonable resolution to this very difficult question has been proposed by the American Society for Reproductive Medicine. They have put forward model cloning legislation which accurately defines the current state of technology, recommends prohibition of the creation of a human child using current cloning technology, and preemption of any other state laws regarding cloning. Importantly, they recommend protection of biomedical research and a sunset provision with a mandatory review no later than four and one-half years after enactment to reassess the technology as well as the ethical issues raised by it and revisiting of the moratorium at that time. This appears to be a reasonable compromise for the various viewpoints presented, supporting research while putting up appropriate safeguards against potential abuse. ❐

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GENE THERAPY: ETHICAL AND SOCIAL ISSUES*

ROBERT M. SADE, M. D.**
GEORGE KHUSHF, PH. D.

Many diseases are genetically determined; for example, Huntington's disease and cystic fibrosis (CF). Others are influenced by genes, but involve additional factors as well; for example, cancer and diabetes mellitus. Recent scientific developments make it possible for medicine to target such genetically related diseases at the molecular level, and thus offer the prospects of effective new therapies. The genes of somatic cells can be manipulated to modify a disease in an individual. If genes in germ cells are modified, a genetic disease may be prevented in progeny as well. In this essay, we will consider some of the scientific, social, and ethical issues associated with such genetic therapies. A related but separate controversy, manipulating genes to modify normal traits, or genetic enhancement, will be examined in accompanying papers.

THE TOOLS OF GENETIC ENGINEERING

Appreciation of the controversies surrounding gene therapy requires understanding certain aspects of the underlying science. We will risk oversimplification in providing a brief review of the biology underlying gene therapy.[1,2]

Genes comprise deoxyribonucleic acid (DNA), and they are replicated during cell division, passing on the information they encode to subsequent generations of cells and of organisms. Genes become functional through a chain of biochemical events: DNA in the cell nucleus is transcribed, by base matching, into messenger ribonucleic acid (mRNA), which then leaves the cell nucleus, attaches to cytosomal ribosomes, and is translated into proteins by pairing of its bases with amino acids. Regulation of the amount of protein produced is achieved through a number of mechanisms, among which is the production of repressor and activator proteins, which prevent the appearance of too much or too little protein, respectively. Modification of genetic DNA leads to changes in both the structure and amounts of protein it ultimately produces.

In recent years, a variety of techniques have been developed to identify genes associated with specific diseases. Since 1990, when the first protocols for gene therapy were approved, over 100 new research protocols have been initiated for a variety of diseases, including cancers, HIV infection, cystic fibrosis (CF), Gaucher disease, severe combined immune deficiency (SCID) due to adenine deaminase (ADA) deficiency, familial hypercholesterolemia, and rheumatoid arthritis, among many others.[3] Proposed for future treatment are such diseases as the muscular dystrophies, particularly Duchenne, and hemoglobin diseases like sickle cell anemia and beta-thalassemia.

In the case of somatic cell therapies, the nature of a particular disease and other factors determine the specific cells targeted for genetic manipulation. Target cells have included lung, liver, white blood, endothelial, and cancer cells. All research to date has involved somatic cells, and the techniques used make improbable the spread of altered genes to germ cells. However, it seems likely that we will ultimately be able to alter the genes of germ cells so that whatever changes are made are passed on to the subjects' progeny. In somatic cell gene therapy, target cells can be altered either in vitro (about two-thirds of existing protocols) and then infused or implanted in the host, or in vivo (the remaining one-third of protocols).

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In current therapies (all of which are somatic cell), vectors are used to introduce new genetic material into target cells. Vectors are agents to which new genetic material is attached. The early experiments in gene therapy used retroviral vectors. Retroviruses are RNA viruses which enter cells and use the enzyme reverse transcriptase to convert RNA to DNA (complementary DNA, or cDNA), thus adding viral genetic material to the host's genome. Researchers can replace part of the viral RNA with human RNA which, in the host cell, transcribes cDNA containing the desired human gene. The host cell cannot distinguish cDNA from its own DNA, so cDNA is functional and can be passed on to daughter cells at cell division. Other vectors have been used since the original retroviruses; for example, viruses like adenovirus and adeno-associated virus, and nonviral agents, like liposomes that encapsulate human DNA, and naked DNA (no protein envelope) that can be placed directly into cells by microinjection.

Three types of gene manipulation are possible. Gene addition, in which the genetic material is added to the target cells with no attempt to incorporate it into chromosomes, is the only method used in human experiments up to this time. Techniques of gene repair can replace abnormal segments of DNA in defective genes in their normal chromosomal site. Gene replacement techniques permit excision of the abnormal gene from its chromosome and replacement with a normal gene. These methods have not been developed sufficiently to use in human trials, but will be critical to the eventual deployment of germ-line therapy.

ETHICAL AND SOCIAL CONCERNS IN SOMATIC CELL GENE THERAPY

Public debate over the ethics of using gene technology to treat human beings raged when recombinant DNA research began in the 1960s. Long before the technology became available for a gene therapy protocol, the emergent discipline of bioethics focused on genetic engineering. The reason for intense interest in a potential but nonexistent technology was straightforward: genetics embodied both the immense promise and the worst fears associated with modern biomedicine. The prospect of altering what many viewed as the blueprint of human life raised questions about "playing God." While some had hopes of eliminating virtually all disease, others saw the specter of eugenics and catastrophic unintended consequences. All believed that there was something unique, something ground breaking about this new science and technology.

Gradually, the debate moved from general philosophical and theological reflection to attempts to develop a practical review process for research protocols. It was at this time that the distinction between somatic and germline genetic engineering was put forward as a way of distinguishing appropriate from inappropriate types of genetic interventions.

Many felt that somatic cell gene therapy was merely an extension of conventional therapies, posing few if any new ethical problems. This view is still generally accepted. Some gene therapies represent novel ways to produce the same medications that are already available at high cost. For example, SCID due to ADA deficiency can be treated by administration of ADA, but the enzyme is very expensive and must be taken frequently. The same enzyme could be produced by the genetic addition of the ADA gene at the cost of a one-time procedure.[4] Other gene therapies have similarities to transplantation. For example, CF may be treated by providing the patient with normally functioning pulmonary cells. Such cells can be introduced in two ways: by doing a lung transplant, or by genetically altering the patient's own lung cells so they are not subject to damage by CF genes. The former is an expensive halfway technology that requires ongoing immunosuppression to prevent rejection, and constant alertness to infection that may result from immunosuppression.[5] Gene therapy, on the other hand, would require one treatment to achieve permanent reversal of the CF pathophysiology, with none of the continuing risks of immunosuppression. In producing normal pulmonary cell function, genetic alteration of the patient's own lung cells seems far less invasive, and is potentially far less costly, than transplantation.

One of the early concerns about gene therapy was that genetic material used to treat somatic cells would find its way into sperm and ova, thus affecting offspring of the patient. By careful selection of vectors and target cells, however, spread of genetic material to germ cells has not occurred. Currently, heritability of genes used in somatic cell therapy seems not to be a problem.

Trials to define limits of safety and efficacy in somatic cell gene therapy have been underway for the better part of a decade. Such therapy has not yet had the success anticipated by many scientists: effectiveness of treatment for most diseases has been disappointing, though it has been encouraging for some. Fortunately, few unexpected complications and side effects have been identified. The process of establishing safety and efficacy of therapeutic gene manipulation seems to be proceeding very much like such efforts directed at other drugs and devices.

Beyond safety and efficacy issues, ethical concerns in somatic gene therapy research are familiar in many other clinical settings: weighing potential harms and benefits, establishment of procedural fairness in selection of patients for research, assurance that consent to experimental treatments is informed and voluntary, and protection of privacy and confidentiality of medical information.

ETHICAL AND SOCIAL CONCERNS IN GERM-LINE GENE THERAPY

Ethical concerns about germ-line therapy have been widely discussed, particularly since the beginning of the Human Genome Project.[6,7] Underlying some of those concerns are technical issues. Germ-line gene therapy is far more technically difficult than somatic cell therapy. Interactions between genes and their genetic repressors and activators are complex, depending in part on their precise location within a particular chromosome. Stable intergenerational transfer of genetic information and accurate gene expression, therefore, will require replacement or repair of a defective gene *in situ*. The only method of therapy currently available for humans, however, is gene addition. Technical breakthroughs are thus needed before gene replacement or repair becomes practical. Although many other technical hurdles face germ-line gene therapy, like minimizing risks of insertional mutations and inadvertent production of chimeras, the highest by far is the unavailability of replacement or repair technologies. Germ-line gene therapy is carried out in gametes or preembryos. This presupposes a reproductive process that involves in vitro fertilization (IVF) for identification of a defective gamete or preembryo. Only at-risk couples willing to use such procedures will benefit from germ-line gene therapy. Even if IVF is used, however, there are questions about why gene therapy would be pursued. If a potential disease is identified in a gamete, then one can avoid the disease by simply discarding that gamete. Any medical procedure involves risks of harm, and there seems to be little warrant for such risk, if the disease can be avoided altogether by choosing not to proceed with a particular gamete.

If a disease is identified in a *preembryo*, which possesses the full complement of 26 chromosomes, the issue is more complex. Those involved in the research related to germ-line gene therapy regularly create and destroy embryos as a part of their research. For those who do not find such destruction of the preembryo problematic, the same question raised about gametes is relevant: why would a defective preembryo ever be implanted? Those who consider it wrong to destroy a preembryo have a stronger reason to pursue gene therapy. However, such individuals would strongly criticize a research process that perfects the techniques of germ-line gene therapy by the use of extensive nontherapeutic research on embryos. Moreover, those who object to destruction of preembryos usually also reject the IVF procedures used to create and test embryos. They would thus be unlikely to avail themselves of the technology for gene therapy.

Such concerns raise questions about why research in germ-line gene therapy should be pursued at all. If not for the sake of treating diseases in particular individuals and their progeny, then it may be for the sake of developing the science needed for enhancing genetically determined characteristics; that is, for pursuing genetic enhancement. The technology needed for enhancement is the same as that needed for therapy. Scientists cannot, therefore, neatly separate the two research agendas, although they could separate the practices, once the technology was developed. If enhancement is illicit, an issue which we consider in the following essay, then reservations about enhancement may extend back to germ-line gene therapy, thus making the somatic vs. germ-line distinction a basis for distinguishing admissible from inadmissable types of research.

Other arguments against permitting germ-line genetic research are related to the possibilities of genetic enhancement the new technology makes possible. Totalitarian governments, for example, may produce superior humans who will reduce the nonenhanced to menial servitude. However, this type of societal engineering, dramatized by such classics as Huxley's *Brave New World*, seems unlikely. There is no reason to think that genetic technologies would be useful to a totalitarian dictator interested in dominating populations, when they are compared with other biological, psychological, and social means for such domination.

A potentially more likely scenario is gradual exacerbation of existing class distinctions, because individuals with financial means might more easily avail themselves of gene technologies. Gene therapy is expensive, and its association with IVF makes it unlikely, in the near term, that costs will be covered by insurance schemes that are moving in the direction of more sparse types of coverage. People of means may thus have better access. This problem is not unique to genetics. It is found in other economic sectors, and technology that is initially expensive usually becomes increasingly available to all people; computer technology is an example. Much of the cost of gene therapy, however, is associated with the labor-intensive character of the highly skilled procedures, making rapid lowering of costs unlikely in the near future. Automation may reduce costs dramatically over longer time periods. Nevertheless, short-term differential access has raised legitimate concerns about the use of public funds to advance such research.

Potential unintended consequences are part of the price of virtually all advances in medicine, but gene technology introduces the prospect of seemingly new kinds of harms. The human genome underlies species design, so the incidental elimination of important but unappreciated function may lead to decreased species fitness. All medical interventions affect human evolution by extending lives that would otherwise end, but germ-line modifications may affect evolution to a greater degree and in a shorter time frame than other interventions. Moreover, conventional medical interventions risk harm to individual subjects, while germ-line modifications pose risks to future generations as well. Some deleterious consequences may not become manifest in the first generation. This makes germ-line gene therapy in some ways more akin to a public health intervention, rather than a traditional medical one.

Other considerations favor pursuing germ-line gene therapy research. A persuasive medical reason is that this kind of therapy may be the only way to treat certain problems. For example, to prevent the expression of certain genetically determined tumors, like retinoblastoma, it may be necessary to reach every individual cell that could initiate growth of a tumor.[8] The only way to be certain that appropriate genetic changes are made in every such cell is to correct the genetic problem in gametes, zygotes, or multi-cell preembryos. As noted above, though, simply discarding cells that contain the tumor gene would completely avoid such illnesses.

Diseases like cystic fibrosis or diabetes could potentially be treated with somatic cell gene therapy, but parents may, for good reason, want to relieve their children of the necessity of undergoing such treatment or of the responsibility of transmitting unwanted harmful genes to their own children. Moreover, it seems far more efficient to cure a genetic disease with a single treatment that will prevent its appearance in future generations, than to treat the disease each time it appears, generation after generation. From a public health perspective, efficient prevention of disease is an important social value, as is conservation of future health care resources. Germ-line gene therapy may lead to both of these outcomes.

CONCLUSION

Somatic cell gene therapy research is relatively uncontroversial, but the debate about germ-line genetic research has not been resolved. Perhaps the strongest argument against an extensive ban on research is that this technology cannot be eliminated. If research is banned in the United States, it will be done elsewhere, with fewer resources to responsibly address the consequences. The science is here, and we must anticipate its development. The key question is whether and how to regulate it so that basic ethical norms are not violated and harms are minimized.

Legitimate concerns regarding the harms that may be associated with gene therapy must be identified and publicly discussed, even as the beneficial uses of gene technology are sought. Gene technologies embody the paradigm of the potential benefits and dangers of modern science. They provide humanity with unprecedented power over its own nature. We can only hope that, as the body of genetic knowledge grows, we will have the wisdom to use it constructively. ❐

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ENHANCEMENT TECHNOLOGY, ETHICS, AND PUBLIC POLICY

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Gene technology has spawned a wide range of controversies since the early days of recombinant DNA research in the 1960s. Many scientific and ethical issues are discussed throughout this symposium. A particularly troublesome set of questions arises from the uses of gene technology to change personal characteristics that are within the range of normal but for which some kind of improvement may be desired. This kind of modification is generically referred to as 'genetic enhancement.'

Almost all aspects of human form and behavior are influenced by genes. Scientists have identified many human features that could potentially be enhanced. This range of features can be categorized into three groups: physical, intellectual, and behavioral, a classification originally suggested by Hermann J. Muller.[1]

TYPES OF ENHANCEMENT

Physical enhancements can be divided into two subgroups: health-related and non-health-related.[2] *Health-related physical enhancements* might include genetic manipulations of the immune system both to improve functional responses to invading microorganisms, bacterial and viral, and to prevent dysfunctions of immunity, like allergies and autoimmune diseases. Some conditions are seen in nearly everyone during aging, so are, in that sense, 'normal;' for example, presbyopia, osteoporosis, and benign prostatic hypertrophy. These normal conditions might also be modified by genetic means. *Non-health-related physical enhancements* include aspects of form and function like size (both height and weight have strong genetic as well as environmental components), the need for sleep, and the aging process itself. All these have strong genetic as well as environmental determinants. Tallness seems to confer certain social advantages, so increasing height to above normal might be considered desirable by some. If the need for sleep could be reduced to two to three hours a night, which at this time seems plausible, then an average functional day could be increased from 16 hours to 21 or 22 hours, which some might consider an advantage. Aging itself seems to have a substantial genetic component, and by appropriate manipulation of genes, most people could be endowed with capacity to live to about 120 years, the age that currently seems to be the upper limit of human life.

Intellectual enhancements seem feasible because many intellectual capacities appear to be related to genetic endowment. Genes have already been identified that increase storage capacity for memory. The ability to retain memory could be multiplied many times by modifying appropriate genes. General cognitive ability seems to be much more genetically complex than capacity for memory, but ultimately could also be improved by genetic means.[3]

Behavioral enhancements may be possible because a wide range of behavioral traits are known to be genetically influenced.[4] Behaviors like agreeableness and conscientiousness are partly determined by inheritance, in the range of 40 to 60 percent, while the remainder is determined by other factors, like environment and personal will, or self-determination. Example of behavioral traits that some might wish to alter are aggressiveness, on the one hand, and friendliness on the other. A person prone to violence might wish to have that tendency tempered both in himself and in his children, while many people might want to increase their own or their progeny's level of agreeableness, kindness, and friendliness. Both goals would be held by most to be praiseworthy.

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ENHANCEMENT TECHNOLOGIES ARE NOT NEW

Much of the uneasiness most people feel about enhancement technologies may come from the belief that we have never done anything like enhancement before and are striking off in new, uncharted, and dangerous directions. Although manipulating human genes has become possible only recently, enhancement itself is not new at all.[5]

We already engage in enhancement of all the physical characteristics, both health-related and non-health-related, cited earlier as potential objects of gene modification. We vaccinate against viruses and bacteria, use reading glasses for presbyopia, and take calcium supplements for osteoporosis. We extend our waking hours by reducing the need for sleep through the use of coffee and other stimulants, particularly, for example, around the time of school examinations. We enhance our children's height and weight through such means as encouraging a healthy diet. Women preferentially select mates for tallness and strength, both to improve the chances of survival of their children (male physical stature and strength being originally a selective advantage), and to influence their genetic endowments.

We engage in enhancement of intellectual traits. We attempt to produce more intelligent children genetically by selecting an intelligent mate. We spend enormous amounts of time, energy, and money on education to enhance intellectual traits: improve analytical skills, sharpen ability to reason, and provide information to ourselves and our children. We use devices like calculators and computers to expand our intellectual power.

Behavioral enhancements are also commonplace. We choose particular methods to socialize and acculturate our children in order to improve their behavior. We instill, through training and example, traits of friendliness and kindness, and attempt to reduce or, at least, to control aggressiveness.

All physical, intellectual, and behavioral traits are in part genetically determined, and in part environmentally, experientially, and self-determined. Human beings have always attempted to enhance capabilities of their children, including the genetic means of mate selection. Gene technology will merely increase our ability to affect the genetic component of human traits and performance: specific familial genetic endowments may be enhanced more rapidly than the generations-long processes of the past, at much less expense. These technologies can achieve only part of the desired effects because genes only partly determine them. The need for socialization and acculturation of our children, through training, education, and caring, will not change.

SHOULD GENETIC ENHANCEMENT BE BANNED?

Enhancement methods, including control of genetic endowment, are not new, yet, many find manipulating DNA for enhancement to be threatening. This reaction has occurred at least partly because some of the scientists engaged in genetic research have vastly exaggerated the power of genes to alter human character and life. Walter Gilbert, the great molecular geneticist, has said, "Knowing the complete human genome, we will know what it is to be human."[6] James Watson, a co-discoverer of the structure of DNA and first director of the Human Genome Project said, "We used to think our fate is in our stars. Now we know, in large measure, our fate is in our genes."[7] The view that human beings comprise little more than their genetic endowment is simply wrong. We are not merely our genes, but also, perhaps largely, what we have made of ourselves under the influence of our families, churches, and friends. The reductionist view of human nature may produce reactive fear of abuse of that power, unjustified fear that can lead to political actions that forbid or undermine research with promise of great benefits to mankind. We see this today in the rush to prohibit genetic and cloning technologies with laws, at the federal and state levels, that threaten to expunge vast areas of useful and unthreatening research.

Genetic enhancement technology seems dangerous in another important respect: when changes are made in germ cells, the altered DNA will be passed on to future generations. Thus, any mistakes would be permanent and potentially widespread and catastrophic. This fear is not well-grounded, however; it assumes that changes in the genome cannot be reversed. It is very likely, though, that the same technology that was used to make the initial change can be used to restore the original genes. Thus, children or grandchildren who want to restore their original genetic endowment will probably be able to do so. It seems implausible that progeny, whose genes have been altered, will want to restore greater susceptibility to infection, to reduce the capacity for memory, to diminish general cognitive ability, or to become less friendly and kind. Any that want to restore those traits, however, will in all likelihood be able to do so by using the same methods to reverse genetic alterations that were used to produce them. It is possible, of course, that changes in genetic material could be harmful and irreversible. The answer to that potential problem lies not in foregoing all the benefits of gene research by banning it, but by effecting protocols to detect harms and to place them in the balance that weighs them against benefits.

Some nongenetic enhancements currently being used may be harmful. For example, androgenic steroids, self-administered for increasing strength and speed, may be associated with premature development of cardiac disease. By itself, this personal harm seems an inadequate reason for banning the use of such drugs in sports competition: we do not ban hang-gliding, which threatens immediate death from falls, nor do we ban professional football, which is associated nearly uniformly with chronic bone and joint disabilities. An important harm of steroid use is to the sport rather than to the individual. Steroid use may change the level of the competition itself and pressure competitors who do not want to take such drugs to use them. To preserve the integrity of their sport, responsible authorities may want to prohibit the use of performance-enhancing drugs, both over-the-counter (catecholamines for asthma) and prescription (steroids), as well as training techniques (blood doping).

It is a long leap from supporting prohibition of enhancement agents by sports authorities to claiming that they should be made illegal. Such an action would impose criminal or civil penalties on the offending athlete, consequences that are far more difficult to justify than prohibiting him/her from competing. In the same way, individual physicians or institutions may have good reasons to wish not to utilize genetic enhancement technologies. Justifying legal proscription, however, would require demonstrating serious harm to others, and the existence and importance of such harm is not at all clear.

THE DANGER OF EUGENICS

The word 'eugenics' has a strongly negative connotation. The term deserves that opprobrium, earned over the last century, as documented elsewhere in this symposium.[8,9] It must be understood, however, that all of the eugenic horrors of the last century were brought on by social and political programs that enforced involuntary eugenics. Widespread harm from abuses of gene technology are likely to result from the same common source: ill advised political and social programs. Such dangers can be substantially reduced by restricting the uses of gene technology to individuals and couples acting voluntarily, informed by all available information about the known benefits and harms of particular genetic manipulations.

What of the possibility that couples, even though making voluntary and well-informed choices, will make poor decisions harmful to their offspring? Such harms are not only possible, they are likely, given the fallibility of human judgment. Individuals and couples already make decisions that are beneficial, and may be harmful; for example, they make mistakes in choosing mates and in their practices of parenting, errors that can result in divorce and other harms to children. Those errors inevitably have long term effects not only on their own children, but also on future generations. Yet, recognizing the importance of self-determination, both to protect the possibility of pursuing personal happiness and to assure political stability, we do not attempt to microregulate mating choices or parenting techniques.

Gene technology has promise of great benefits and, with it, possible harm, but it should not be politically regulated any more than equally powerful enhancements we provide our children through reproductive choices, and parenting should be controlled in that way. Our society is profoundly pluralistic, and no central agency can predict what changes in physical, intellectual, and behavioral characteristics will be useful or beneficial to couples or to their children. With that in mind, our public policy should not attempt to provide a detailed, prescriptive ethical framework for what is permissible and what is not permissible in gene therapy or genetic enhancement. We suggest, instead, that public policy construct a nonprescriptive framework that describes the general conditions under which development of gene technology, both research protocols and practical usages, can proceed.

FRAMEWORK FOR POLICY ON GENE TECHNOLOGY

1. Participation in any genetic research or other programs must be fully voluntary.
2. Every participant in all genetic research or other programs must be provided full disclosure of potential benefits and risks associated with gene technologies. Consent to the use of any technique must be both informed and voluntary.
3. No political or governmental entity may engage directly in any program using gene technology to alter the DNA of human beings.
4. Genetic information regarding individuals and families must be protected with full confidentiality and privacy, within the limits of information technology.
5. Access to gene technology must not be legally denied to any individual or group.

A nonprescriptive framework such as this has several advantages. It gives families the power to weigh risks and benefits and the freedom to make changes in themselves and their children that they find desirable in the context of their own lives. The process of developing the technologies, then discovering the risks and benefits for families to weigh in making their decisions will be slow and messy, but necessary. Such a framework also obviates the need for bioethicists to agonize over an exotic ethics of enhancement. Policies of this kind are most likely to preserve the free democratic institutions that are our best hope for preempting abuse of gene technologies by demagogues and potential totalitarians. They recognize that life itself is not free of risk, but that the weighing of risks to themselves and to their children is rightfully the responsibility of individuals. These policy guidelines affirm the pluralism and individual freedom of our society while permitting genetic research that may reach goals to which all of medicine aspires: major reductions in disease and disability and general improvement of the human condition. ❐

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SOME REASONS TO BE CONCERNED ABOUT GENETIC ENHANCEMENTS

GEORGE KHUSHF, PH. D.*

New technologies can be exciting. They promise to expand the range of human possibility and to overcome the evils that nature bestows upon us. However, there are also risks to which we can become blind if we are not circumspect in our assessment of both the potential benefit **and harms**. In fact, since potential harms are often less tangible, more distant, and not easily quantifiable, they may be ignored altogether. Here, I briefly respond to Dr. Sade's arguments in favor of genetic enhancements by attempting to bring into view some of the dangers that are underemphasized in his essay.[1]

After briefly discussing potential benefits of enhancements such as increased memory or friendliness, Sade provides three reasons for why they should not be prohibited; namely, genetic enhancements are no different than many other enhancements such as education or a good diet, they do not involve harm to others, and they do not raise the specter of eugenics, as long as the government stays out of the way. I will respond to each of these arguments in turn. Before I do this, however, I would like to provide a more general response to the way Sade argues for his position.

Instead of positively arguing for enhancements, Sade criticizes arguments against enhancements. He assumes that the burden of proof rests on those who would prohibit new genetic technology; if they cannot make their case, then there is no reason to introduce regulation. This is an assumption we commonly accept in our liberal society regarding those activities that are associated with individual liberties. However, there are also other kinds of activities that more directly involve others. If I want to build a dam that floods your land or run a gas main through your property, it may be possible to do this even against your will, but I have to make the case that the public interest is sufficiently served to overrule your right to be left alone. The same goes for public health interventions like the fluoridation of water or forced immunizations. In these cases, the burden of proof rests on those who would favor the intervention, since their activity interferes with the liberty of the people who want to be left alone. Sade's arguments implicitly assume that genetic enhancements are like the individual activities that are generally protected in a liberal society, not like the public health interventions. This assumption is inappropriate.

The problem is that germ-line genetic enhancement does not fit neatly into traditional ways of conceptualizing individual or public interventions, since it has elements of both. Alteration of the germ-line affects all future generations, and thus introduces risks that extend far beyond the individual who is initially the subject of the intervention. Unintended and unanticipated consequences may not even become manifest until later generations, and such iatrogenic harms may not be reversible. I see no reason for Sade's confidence that any changes can be fully undone, as if one could return to the original without any trace of gene replacement or repair.

Concern about the emergence of harms in future generations is unique when considering iatrogenic harms. At worst, in the case of toxic effects on gametes and the development of a fetus, a nongenetic medical intervention in a parent may extend to the next generation. However, with germ-line genetic engineering, all future generations are subject to the risk. A germ-line intervention in the creation of your child is potentially an intervention on my grandchild, since our children may wed and have their own children. Each subsequent generation multiplies the influence of the initial alteration. It is as if there were a communicable virus that spreads out in a population, only in this case the spread is into the future. This propagation of the initial intervention is one characteristic of germ-line interventions that make them more akin to public health, rather than traditional medicine.

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While Sade may concede that this element of **germ-line genetic** enhancement is unique, he argues that the notion of **enhancement** is not, since we find it in many areas, including education, diet, and even in marriages, where a spouse may seek to enhance a future child by selecting a mate for certain traits such as intelligence and height. I agree that enhancement is found in other areas. In fact, I would even say that the capacity for rational reflection upon and appropriation of the means for enhancement is a part of what makes us human, distinguishing us from other animals, where any enhancement of natural endowment takes place by way of an evolutionary process of which they are unaware. I am thus not arguing against enhancement per se. But there are good and bad approaches to enhancement. Education or a carefully monitored diet are usually good. The taking of steroids for strength or the selection of a mate for eugenic reasons are usually bad. There are reasons to think that germ-line genetic enhancements are more like the latter than the former.

A clue to the difference between good and bad kinds of enhancement can be found in the debate about the use of performance enhancing drugs in sports. Strength and agility are enhanced by regular training, education, and diet. Why are drugs such as steroids excluded, when these other types of enhancement are embraced? The reasons cannot simply relate to cost or unfair advantage, since some of the training methods (e.g. sports camps, personal trainers, etc.) are very expensive and some people have access to opportunities that others do not have. Further, performance enhancing drugs would not give an unfair advantage to some if everyone equally had access to them. Rather, the problem is that if some people were allowed to use them, then all would feel pressured to use them, if they wanted to remain competitive. However, at the same time, most people involved do not want to use them. There are risks associated with such drugs, and they introduce elements into the training that are dangerous and separate from what is really valued in sport. It is not simply speed or power that are valued. After all, a rocket can realize speed better than any Olympic track athlete, and a cannon can do much more than a person in a shot put. Instead, one looks for the qualities that are associated with human flourishing, qualities of a sound training program, good diet, and proper mentors, as well as human virtues such as commitment, endurance, and strength of will. The factors that go into training for sport are the factors that mimic a successful life. Drugs for enhancement do not introduce anything into the equation that is not already found in the management of diet. However, they do introduce risk of new harms. They also distort the way people are regarded, making athletes into the product of a medical experiment. There is a shift from a positive sense of individual and social realization of human potential to a technocratic emphasis on "making." The prohibition of performance enhancing drugs thus reflects a social decision about the way in which human excellence in sports is to be realized. It prevents some people from gaining advantage by a method that will harm the whole fabric of social interaction.

Similar types of concerns lie behind the general regulation of genetic enhancements. As in sport, we regularly compete for slots at a university or attractive employment positions. Normally, the market regulates the pursuit of self-realization so that it simultaneously works to the common good. Competitive and cooperative activities provide opportunities for the realization of human excellence. If medical enhancements give the edge for success, all who wish to remain competitive will be pressured to use them. When contemplating the means for success, the emphasis shifts from education, development of character, innovation, etc. to making oneself the object of a scientific, technocratic intervention.

Sade argues that there is a big leap from the type of self-regulation found in sport to the broader type of prohibition associated with legal regulation of enhancements. "Justifying legal proscription...would require demonstrating harm to others." However, he fails to recognize the way the genetic enhancements alter the playing field, just like a dam permanently alters the landscape. Further, the subjects of the genetic interventions (the future generations) are different from those making the decisions about enhancement (the parents), so it is not simply a question of what a person does with his or her self. In these decisions, all people are intimately intertwined with one another. The onus is thus not on the person who has reservations about enhancement to show that there are harms (although the risk of harm is obvious). Rather, the onus is on those who would permanently alter the social fabric for everyone. They must show that the benefit is so great as to warrant imposing these alterations on those who do not wish them.

Finally, I raise a concern about eugenics. Sade argues that the only type of eugenics that we should be concerned about comes from above, by government. I agree that we should be very concerned about such forms. However, today an even greater risk comes from below. This point is well made by Lee Silver, a professor in the Departments of Molecular Biology, Ecology and Evolutionary Biology at Princeton University:[2]

> "It is individuals and couples...*not governments*...who will seize control of these new [reprogenetic] technologies. They will use some to reach otherwise unattainable reproductive goals and others to help their children achieve health, happiness, and success. And it is in the pursuit of this last goal that the combined actions of many individuals, operating over many generations, could perhaps give rise to a polarized humanity more horrific than Huxley's imagined *Brave New World*."

Silver believes that it is already too late to stop the development and proliferation of this science and technology. He may or may not be correct. We should at least pause and realistically take stock of the dangers that may lie ahead. ❐

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On the Cover

HIPPOCRATES

Historically, the issue of medical ethics goes back as far as Hippocrates, who is pictured on this month's cover. Hippocrates was born on the Greek island of Cos in 460 B.C. and died in 370 B.C. The 1847 American Medical Association "Introduction to the Code of Medical Ethics" reads..."Well and truly was it said by one of the most learned men of the last century: that the duties of the physician were never more beautifully exemplified than in the conduct of Hippocrates, nor more eloquently described than in his writings."[1] Even today the Oath of Hippocrates is a testimony to the physicians' duty to mankind. Through the centuries, various changes have been made to the Hippocratic Oath, reflecting societal influences and the objection of religious groups to swear to Apollo.

In 1796, Thomas Percival, an English physician, wrote a code of ethics for his son who was to enter medical practice. Percival's code expressed generally accepted standards of morality and traditions of good taste. The code failed to present a distinct moral philosophy, but it did deal with the professional relationships of physicians in a comprehensive manner. First published in America in 1803, Percival's code soon won acceptance as a standard of conduct in the American profession, which then lacked unique ethical traditions.[2]

On May 5, 1846, in New York City, the delegates gathered resolved "That it is expedient for the medical profession of the United States to institute a National Medical Association for the protection of their interests, for the maintenance of their knowledge and the extension of their usefulness..." The topics covered in the program included organization, ethics, educational requirements, licensing of physicians, recording of vital statistics, and nomenclature of diseases.[3] The Code of Ethics of the American Medical Association was modeled after that of Thomas Percival. This 1847 code served the Association until 1903 when the first revision of the code was written under a new generation of physicians.

With the organizing meeting of the South Carolina Medical Association in 1848, the Minutes of the Proceedings of the Medical Convention of South Carolina establishes the By-Laws of the South Carolina Medical Association, and the 16th By-Law of this document reads: "The Association adopts, as its Code of Ethics, the one which has been commended and adopted by the American Medical Association." This "Code of Ethics, Adopted by the American Medical Association, and recognized by the South Carolina Medical Association" is printed in full in the same 1848 SCMA proceedings.

Though some aspects of the discussion change, we can be assured that ethics have been discussed and will continue to be discussed as social and professional circumstances surrounding the profession evolve.

Jane McCutchen Brown
Waring Historical Library

REFERENCES

1. Minutes of the Proceedings of the Medical Convention of South Carolina, held in Charleston, in February 1848. Charleston: Burges, James & Paxton, Printers 1848; p. 33.
2. Konold Donald E: A history of American medical ethics 1847-1912. The State Historical Society of Wisconsin 1962; p. 9.
3. Konold: A history of American medical ethics 1847-1912. pp. 8-9.
4. Minutes of the Proceedings of the Medical Convention of South Carolina, p. 29.

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***Danny Thomas,** Founder*

Alliance Page

1998-1999 SCMAA HEALTH PROMOTION COMMITTEE

Alliances across the state are gearing up to help promote the health and well being of South Carolinians. All alliances/auxiliaries will, in their own way, help to make a difference in their communities and across the state. This year, the Health Promotion Committee is asking each county to assist us with two important projects to further our endeavors with "SAVE"—Stop America's Violence Everywhere. The nationally recognized SAVE day this year is October 14, 1998; however, each county is encouraged to sponsor SAVE projects throughout the year.

In recognition of the need to end domestic violence in homes across South Carolina, the SCMAA has two projects for the upcoming year:

1. **Emergency Listings in Telephone Directories**. Most telephone directories do not list the telephone number of the local domestic violence shelter in its emergency listing pages. Most victims may not know the specific name of their local shelters; therefore, they cannot quickly locate these important telephone numbers at a time when time may be of the essence. Throughout this year, the SCMAA Health Promotion Committee will be contacting telephone directory publishers in South Carolina, requesting that telephone numbers of shelters for domestic violence victims be included in their emergency list page.

2. **"Share a Shoebox with a Shelter."** In recognition of SAVE day, each county is asked to designate one month during the year to request that their members bring a shoebox filled with sample sizes of personal hygiene items, such as toothpaste, shampoo, soap, etc. These boxes will be distributed to the local shelters so that women and children, who generally arrive at a shelter with few personal belongings, can have these essential items.

In addition to these two projects, Teen Hotline Cards are still available for distribution to middle and high school students in our state. These wallet size, laminated cards contain toll-free hotline crisis numbers. Also available for distribution are the Elder Abuse pamphlets. These pamphlets have been produced to help make the public aware of the signs and symptoms of elder abuse.

For more information about any of these programs, you may contact Donna Richter at (803) 366-1990 or Lisa Schroeder at (803) 366-0750, SCMAA Health Promotion Co-Chairpersons.

Classifieds

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Gray Matter

"Matters of Interest to South Carolina Physicians."

Thornton & Thorne give the medical community something to think about this month.

HOW MUCH DO CIGARS COST?

How much does it cost to smoke cigars? If you buy life insurance, the cost will be significant. That's because most life insurance companies will not issue their lowest cost policies to cigar smokers.

There have been dramatic decreases in the cost of life insurance over the last few years. By far, the biggest premium decreases have been for insureds who do not use tobacco in any form and who otherwise qualify as preferred risks.

Here are premiums for $1,000,000 of ten-year, level term insurance for a 45 year-old male from one company. This example demonstrates the substantial effect that tobacco use has on policy cost:

UNDEWRITING CLASS	***TOBACCO USE***	***ANNUAL PREMIUM***
Preferred-Risk No-Tobacco Use	None	$1,260
Standard Risk Non-Smoker	Cigars, but No Cigarettes	$2,000
Preferred Smoker	Cigarettes	$3,530
Standard Smoker	Cigarettes	$5,040

The Manufacturers Life Insurance Company (USA) 10 Year Level Term (97)

The time period in which the insured may not have used tobacco varies from company to company. It is usually at least 24 months, and can be as long as 60 months, prior to the date of applying for the policy. And, yes, just an occasional cigar may disqualify an applicant for a no tobacco use policy!

The question reads *"have you used tobacco in any form in the past x months"?* Whether x equals 24 or 36 or some other number of months, the point is that even one cigar will prevent the applicant from receiving the best rate from the vast majority of companies. In fact, most will not allow cigar smokers to qualify for even their standard-risk, non-smoker policies (the second best rate).

There are a select few companies that will allow a cigar smoker to qualify for a preferred risk, no tobacco policy. These companies have a limit on the number of cigars that may be smoked. The maximum is usually in the range of 6-12 per year.

Views expressed herein are those of the authors only and in no way represent the SCMA. We do not give tax advice. Only your attorney and accountant are qualified to do so.

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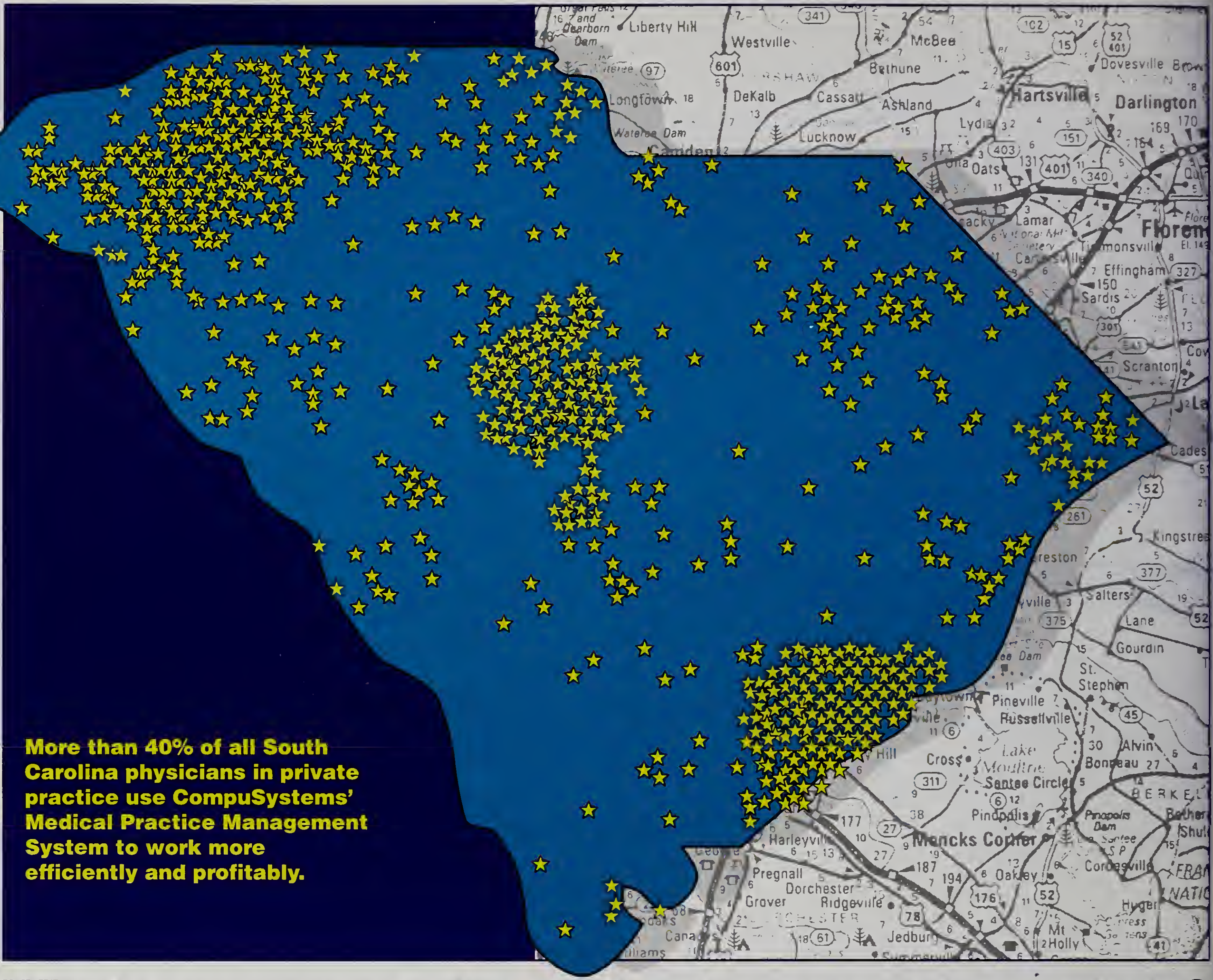

More than 40% of all South Carolina physicians in private practice use CompuSystems' Medical Practice Management System to work more efficiently and profitably.

What can a map tell you about a computer system?

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For example, it might show how a 16-year commitment to "Working for Physicians" has resulted in over 660 installations in South Carolina, representing some 1,930 physicians — over 40% of the 4,600 in private practice in the state!

It might bring home how features like "on-the-fly" refiling, encounter-form tracking, and direct transmission to South Carolina Medicare, Medicaid, and Blue Cross/Blue Shield (with no per-claim charges) are improving physicians' revenue.

It could clarify how critical "one-call" support can be in helping offices stay productive — how telephone support staff, software and hardware engineers, technicians, trainers, and a fleet of service vans can provide support unmatched in the industry.

It might demonstrate how technical expertise brings a host of innovations, starting with the first integrated, direct electronic claims capability in a practice management system.

Or it could validate the concept of regional focus: By selling systems only in the Southeast, a computer company can keep customers up to date on the latest insurance filing requirements.

It could emphasize the flexibility of multi-user, multi-tasking software that runs on the most popular operating system in the world.

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The Journal

OF THE SOUTH CAROLINA MEDICAL ASSOCIATION

VOLUME 94
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OCTOBER 1998
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PREVENTION OF PRESSURE ULCERS
VOCATIONAL REHABILITATION OF MEDICINE
THE PHYSICIAN ASSISTANT IN SOUTH CAROLINA

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Physician Assistants (PAs) are health care professionals who, under direct or indirect supervision of physicians, provide medical services that would otherwise be performed by physicians. Until a change in PA practice regulations a few years ago, South Carolina was not a particularly hospitable practice environment for PAs. Now, however, PAs can:

- Write prescriptions within an approved formulary
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- Diagnose health problems
- Develop treatment plans
- Make hospital rounds
- Serve as "House Officer" in your hospital
- Enable Rural Health Clinic status
- Perform QA functions
- First assist in surgery

What does all of this mean to your practice? It means more time for you to spend with more complicated patients. It means time for CME or (what a concept) time with your family. It means being able to expand your practice to allow access to previously underserved populations. It means cost-effective quality health care for a greater number of people.

For more information about hiring a PA and what they can do for you, call (843) 792-6490 or write:

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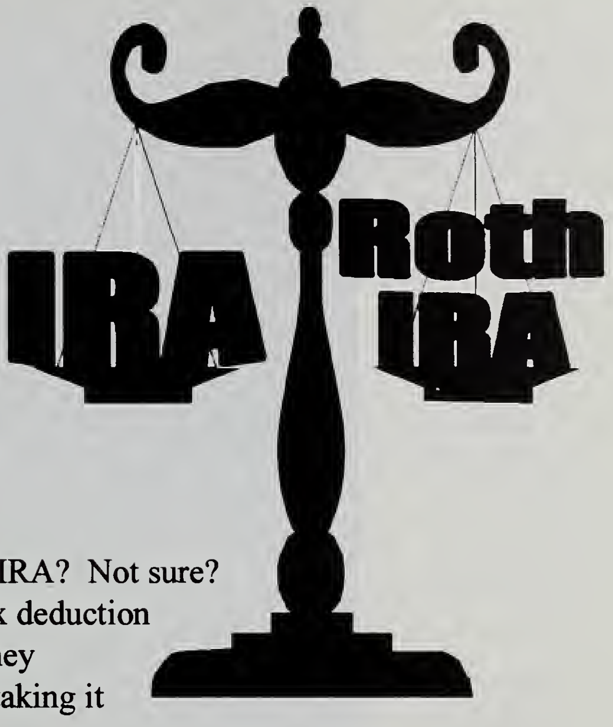

Which is better, a traditional IRA or a Roth IRA? Not sure? Let's compare. With a traditional IRA you get a tax deduction for the money you contribute to the plan. That money grows tax free, but then when you retire and begin taking it out…it's all taxable.

With a Roth IRA, you don't get a tax deduction for money you put in, but it does grow tax free. And when you retire, and begin taking money out, it all comes out tax free.

So which one is better? Well, if you said you don't know, you're right. There's no way of knowing today which is best for you. That's because we don't know what the tax rates will be in the future, when you're ready to retire. So there's no way of knowing whether a tax deduction today is worth more than tax free retirement income in the future. But what if you could have both?

What if there was a third type of Individual Retirement Plan? One where you get to deduct money you put in your plan, and watch it grow tax free, like a traditional IRA, but then when you retire and begin taking money out…it comes out tax free too, like a Roth IRA. Now which one is better? Pretty easy choice, isn't it?

What if you could set aside much more than the minimal amounts allowed for a Roth IRA, or a traditional IRA...or a 401K or Keogh Plan? In fact, what if you could set aside 25 thousand, 50 thousand, 100 thousand dollars a year or more…get a tax deduction up front, earn tax free growth, and receive tax free retirement income too?

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President's Page

THE EXCITEMENT OF SCIENCE

Over the last several years, we have all been discouraged about managed care, Evaluation and Management (E&M) Guidelines, and fee structures. But, do not forget the Magic of Science. We live in an unprecedented time of medical scientific achievement.

One of the reasons we all went into medicine was so we could combine our love of people and our love of science. And this is Science's Golden Age.

Think of what a relatively "old" technology, monoclonal antibodies have done for our patients: better insulin, better vaccines and other drugs, molecular research, and identification of cellular components and molecules.

The Genome project is nearly complete. We have nearly complete sequencing of the human gene and several abnormal ones. Subsequent abnormal proteins can be identified and negated. Animal cloning will make possible "factories" of pure, selected drug products. Families can receive better and informed counseling.

Computer and mechanical technologies can now provide for remote surgeries and transmission of x-rays and other images. Computer technologies have made possible micro machines that explore and repair inside the human body (e.g., coronary and other arteries).

Enzyme research has made possible advances in impotence treatment, arthritis treatment (possibly a "miracle" breakthrough), and immunology and cancer treatments. The amazing list goes on and on.

This is a great time to be a physician. We can do so much more for our patients. We must be vigilant to apply all of this new power in careful, humane, and ethical treatment.

Stephen A. Imbeau, M. D.
President

The Journal™ OF THE SOUTH CAROLINA MEDICAL ASSOCIATION

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October 1998

MEDICARE UPDATE

It's Time to Get on the Web: The Internet is becoming more and more a part of our lives. And, Medicare is jumping on the bandwagon. This year, the Health Care Financing Administration (HCFA) is requiring the Fee Schedule to be available for free through the Internet at their website, www.pgba.com. It will not be mailed to you with the 1999 enrollment package. You can receive it on paper by special request only if you pay a fee for printing and mailing. This fee is yet to be determined.

In addition, the South Carolina MEDPARD will only be available on their website. They will not be distributing it to providers or beneficiaries. This is required by HCFA. Palmetto Government Benefits Administrators (PGBA) realizes this is a big change for most of you. Keep in mind that 92 percent of the physicians in South Carolina are Medicare participating providers. Your beneficiaries should not have a problem finding a Medicare provider.

Did you know PGBA's website is currently packed with useful information? Check it out. You can find hot topics, advisories, fee schedules, and much more. If you register on the site as a provider, you'll receive information especially for you. This keeps you up-to-date on the latest Medicare news.

Remember, their web address is http://www.pgba.com. HCFA's web address is http://www.hcfa.gov/medicare.

Free UPIN Directory on CD-ROM: You can order the 1998 Unique Physician Identification Number (UPIN) Directory on CD-ROM from PGBA at no cost to you. The directory contains a complete updated national listing of all physician UPIN records. Access to UPIN information enables you to place the UPIN of the referring or ordering physician on Medicare and other claim forms. Don't forget, the CD is free. Just send a request in writing to:

Medicare Part B Publications Coordinator
Palmetto Government Benefits Administrators
P.O. Box 100190
Columbia, S.C. 29201-3190

Use a Modifier with Non-physician Practitioner Claims: All claims filed for non-physician practitioners (NPPs) should include a modifier. This is effective immediately and includes services for physician assistants, nurse practitioners, and clinical nurse specialists. Using a modifier helps claims to be processed correctly. This is a change from the June 1998 *Medicare Advisory* which stated no modifier was needed except for assistants at surgery services. If you believe your claim was paid at the wrong amount, please resubmit it with the modifier.

Medicare Travel Allowance Fees for Collection of Specimens: Effective October 1, 1998, Medicare Part B covers a specimen collection fee and travel allowance for a laboratory technician to draw a specimen from either a nursing home patient or homebound patient. Payment is based on the clinical laboratory fee schedule. This applies to claims received on or after January 1, 1998. Please refer to page 18 of the September 1998 *Medicare Advisory* for additional information regarding payment to travel for specimen collection.

(Continued on page 4)

PEDIATRICIAN ANNOUNCES CANDIDACY FOR S.C. HOUSE OF REPRESENTATIVES

Francis E. Rushton, M.D., has announced his intent to run for the South Carolina House of Representatives from District 124 in Beaufort as a Democrat. He is replacing a candidate who resigned for business reasons.

Currently, there are no physicians in the South Carolina Legislature. Physicians have a tradition of problem solving and consensus building. Physicians also possess a unique knowledge of the problems their patients encounter and the skills to address their patients' problems.

Dr. Rushton has worked with the Legislature as an advocate for patients on many health care issues. At this point, he believes that he would be more effective on the inside as a member of the Legislature. This is your opportunity to help elect a practicing physician who can be the voice of the medical community when the Legislature is making laws affecting health care in South Carolina. You can make a donation to "Rushton for the House." The legal limit is $1,000, but any amount that you contribute will be of tremendous help to him. Elections are November 3. Time is of the essence. **Contributions should be sent to "Rushton for the House," c/o Lowcountry Pediatrics, P.A., 964 Ribaut Road, Beaufort, S.C. 29902.**

HAVE YOU BEEN SPENDING TOO MUCH FOR YOUR AT-HOME LONG DISTANCE SERVICE?

Take this quick comparison test to find out.

- 7.5 cents/minute x __________ out-of-state call minutes = $____________
- 10.3 cents/minute x __________ in-state call minutes = $____________

New Monthly Total = $____________

If your "New Monthly Total" figure is lower than your current long distance phone bill, then you owe it to yourself to sign up for the SCMA residential long distance savings program. Here are the facts:

- 7.5 cents/minute for calls outside South Carolina, billed in one minute increments.
- 10.3 cents/minute for calls within South Carolina, billed in six second increments.
- Guaranteed rates available 24 hours a day, seven days a week.
- No monthly maintenance fee or surcharge.
- No contract involved.
- Personal 800 numbers available for just $2 a month–great for college kids!

For further information or to sign up for this great program available only to SCMA members and their employees, just call (800) 828-1918.

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MARK YOUR CALENDAR

The SCMA's Annual Meeting and Scientific Assembly is scheduled for April 29-May 2, 1999, at Charleston Place Hotel, Charleston, South Carolina.

SCMA WORKSHOPS

HOW TO BUILD A MOTIVATED AND COMMITTED STAFF WITHOUT BREAKING THE BANK

November 5, 1998

Unemployment rates are at an all-time low, experienced employees are in demand, and the days of hefty raises are a thing of the past because of the squeeze caused by managed care. At the same time, patient satisfaction and the need for quality, responsive service has never been greater. It is more important than ever that you have a motivated, committed staff to provide the kind of service and care that your patients are demanding. This seminar will provide you with practical, nitty-gritty suggestions that you will be able to implement the next day. Register by October 26, 1998.

9:00 a.m. - 12:00 p.m.; Registration: 8:30 a.m.
or
1:00 p.m. - 4:00 p.m.; Registration: 12:30 p.m.
Columbia, Clarion Town House Hotel

MEDICAL TERMINOLOGY

November 17, 1998

Each day, your office managers, billing personnel, and other members of your staff encounter unfamiliar terminology in the course of their workday. These terms can be daunting. Ignorance and intimidation can lead to needless billing errors in filing, documentation, and billing. Mistakes can easily be prevented by educating your staff in the basics of medical terminology. Register by November 5, 1998.

9:00 a.m. - 4:00 p.m.; Registration: 8:30 a.m.
Columbia, Clarion Town House Hotel

Space in each program is limited, so be sure to register early. If you have any questions, please contact Melissa Hamby, extension 253, at 798-6207 in Columbia, or at (800) 327-1021 statewide, or by e-mail at melissa@scmanet.org. ❐

PROTECTING YOUR PRACTICE

In conjunction with the South Carolina Society of Addiction Medicine, the University of South Carolina School of Medicine, Palmetto Richland Memorial Hospital, and the South Carolina Medical Association present the Sixth Annual Alcohol and Drug Issues Conference for Clinicians.

The conference is scheduled for December 12-13, 1998, at the Clarion Townhouse in Columbia. The registration fee is $95. For more information and a registration form, please contact Steve Hasterok at the Office of CME, 3555 Harden Street Extension, Suite 100, Columbia, SC 29203. You may also contact him at (803) 434-421, or by fax at (803) 434-4288, or by e-mail at steve@richmed.medpark.sc.edu. ❐

PCN UPDATE

Physicians Care Network (PCN) now has 6,619 participating physicians, 690 participating ancillary providers, and 84 participating hospitals. PCN currently has 95 contracted groups and four groups pending for contracts with 56,346 covered lives. We will provide more information as contracts are received.

NEW GROUPS

- CheckMate Health Plans; Aiken; effective 8/1/98; Access/Peer Review.
- Auto Supply and Equipment; Charleston; effective 5/1/98; Access/Peer Review.
- First Continental; Statewide; effective 10/1/98; Access/Peer Review.
- Oconee County; Walhalla; effective 7/1/98; Access/Utilization Review.

Cardinal Companies terminated with PCN effective 9/1/98.

Please remember that all inpatient admissions, certain outpatient services, certain outpatient surgical and diagnostic procedures, and certain prescription drugs require precertification and/or prior plan approval (PPA). Please see Exhibits A, B, and H in the provider manual for clarification of specific precertification and/or PPA requirements.

If you have questions about PCN, please contact Cindy Osborn, Network Coordinator, PCN, at (803) 798-6207, extension 257 or statewide at (800) 327-1021. You may also send an e-mail message to cindy@scmanet.org.

SUPPORT OUR FUTURE PHYSICIANS

In last month's newsletter, we announced that the South Carolina Institute for Medical Education and Research (SCIMER) is resuming its program to send Season's Greetings cards for you in lieu of other gifts you may have been sending during the holiday season.

By now, you should have already received the flyer about the Season's Greetings program. Please pledge your support of our future physicians by making a tax-deductible contribution to SCIMER. For a minimal contribution of $10 per person (or group name), you can say "thank you" to those who have helped your practice during the past year. At the same time, you will be financially assisting a medical student. In honor of each contribution, SCIMER will send an attractive Season's Greetings card to each person or group in recognition of your gift. Simply send your list along with current addresses and your contribution to SCIMER no later than December 14, 1998. Remember that today's medical student is tomorrow's physician who will be dedicated to the health of South Carolinians in the coming years.

If you have any questions about the program, please contact Melissa Hamby, extension 253, at 798-6207 in Columbia, (800) 327-1021 statewide, or by e-mail at melissa@scmanet.org.

MEDICARE UPDATE (continued)

Expanded Coverage for Blood Glucose Monitors and Test Strips for Diabetics: Medicare currently provides coverage for blood glucose monitors and test strips for those diabetics that are insulin treated. Under the conditions mentioned, Medicare is expanding coverage to those diabetic patients that are not treated with insulin. This was effective July 1, 1998.

There are several different types of blood glucose monitors that use reflectance meters to determine blood glucose levels. Medicare coverage of these devices varies, both with respect to the type of device and the medical condition of the patient for whom the device is prescribed. Page 19 of the September 1998 *Medicare Advisory* has detailed information about the glucose monitors and other supplies that Medicare will cover for diabetic patients. Medicare will pay for all test strips that are medically necessary. These claims are processed and paid by your Durable Medicare Equipment Regional Carrier (DMERC). To bill DMERC, suppliers must obtain a supplier number from the National Supplier Clearinghouse (NSC).

Medicare, through the DMERC, will only cover monitors designated for home, not institutional use. The DMERC for South Carolina is:

DMERC - Region C
Palmetto Government
Benefits Administrators
P.O. Box 100141
Columbia, S.C. 29202-3232
(803) 619-4300

You may contact the National Supplier Clearinghouse at:

P.O. Box 100142
Columbia, S.C. 29202
(803) 754-395

❒

MEDICAID UPDATE

Guidelines for Out-of-State Referrals: Please remember that prior approval must be obtained before referring a recipient out of the South Carolina Medicaid service area. The South Carolina Medicaid service area includes all counties within S.C. and those counties within 25 miles of the S.C. borders.

Out-of-state services are covered under the following conditions: emergencies, pregnancy related services, children two years and under, and as a referral from a S.C. physician. All referrals must be requested and approved prior to the date of the treatment. Approval requests should be in writing, and the primary diagnosis must be included with the request. All requests should include documentation to support the need for the services to be done out of the service area. For further clarification of policies, contact the out-of-state coordinator in Physician Services at (803) 253-6138 or (803) 253-6134. ❒

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PREVENTION OF PRESSURE ULCERS: A NEW APPROACH

KIMBERLY S. COX, B. S. N., R. N.*
TERRY HOLDREDGE, M. D.
JANET TIMMS, Ed. D., R. N., C. S.

Pressure ulcers are a significant health care problem for individuals and society. Individuals are affected in terms of pain, disfigurement, financial expense, and prolonged disability. Society is affected in terms of expenditures and extensive utilization of health care resources. The estimated cost per pressure ulcer is $78,000 and requires an average inpatient length of stay of three months.[1] Furthermore, significant mortality is also associated with pressure ulcers. Approximately 60,000 people are estimated to die annually secondary to complications from pressure ulcers.[2]

The National Pressure Ulcer Advisory Panel estimates that over one million people in hospitals and nursing homes suffer from pressure ulcers. Although the prevalence of pressure ulcers among persons who are cared for in home settings is not fully understood, studies have estimated prevalence at 12.9 percent.[3] Higher prevalence rates have been reported for sub-populations. A prevalence rate of 60 percent has been reported among hospitalized quadriplegic patients, 66 percent in elderly patients admitted for femoral fractures, and 33 to 41 percent for critical care populations.[3] Pressure ulcers predominantly occur in areas of the body where soft tissue overlies bony prominences. Burns and Orenstein[1] and Bryant[2] documented the right and left ischial tuberosities as the most common anatomical sites for pressure sore development. Other common sites for pressure sore development include: the coccyx, greater trochanters, malleoli, and the heels. It is generally understood that most pressure ulcers result from occlusion of capillaries, veins, and lymphatics. Constant pressures as low as 60 to 70 mmHg may produce irreversible tissue damage in as little as one to two hours.[4]

METHOD OF STUDY

A pilot study was developed to compare pressure relieving characteristics of the following devices: a Sequentially Alternating Low Air Loss Seating System (SALSS), the static ROHO cushion, and a foam filled office chair. The SALSS, developed by Terry Holdredge, M.D., consists of 25 inflatable cells which comprise the base of the seating system. The dimensions of each cell are 3.25" x 3.25" x 5." The SALSS operates by a predetermined diagonal pattern of inflation and deflation of selected cells. With the SALSS, true pressure relief occurs when a person's bony prominence is positioned over a deflated cell. The SALSS is covered by Ultrex, a microporous material which allows high vapor and moisture transmission rates.

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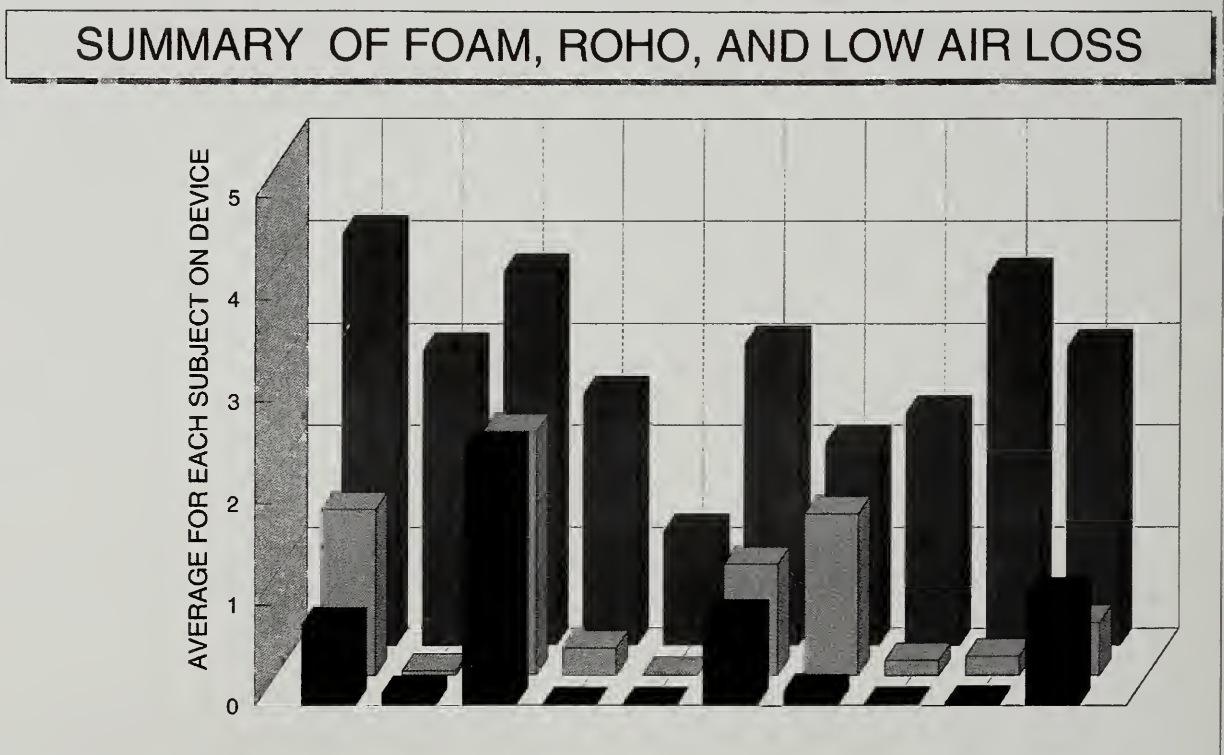
*Address correspondence to Ms. Cox at Bearwood Plastic Surgery Center, 3031 Highway 81 North, Anderson, SC 29621.

Ten healthy volunteers, three males, and seven females between the ages of 20 and 27, participated in the study. Each participant completed a standardized health history form and was randomly assigned to a testing group. Testing groups were distinguished by the order in which the different seating apparatuses were tested.

Following a standard procedure for testing, measurements of capillary refill and interface pressure (mmHg) were obtained by placing probes over each participant's right and left ischial tuberosities. Capillary refill measurements were calculated by using a Laser Doppler manufactured by Vasemedic Incorporated, and pressure readings were calculated by using a bladder type transducer manufactured by Gaymar Industries. Capillary refill and pressure measurements were obtained for each participant sitting on each apparatus for a time interval of 10 minutes. Data was collected and analyzed by using Procomm Software.

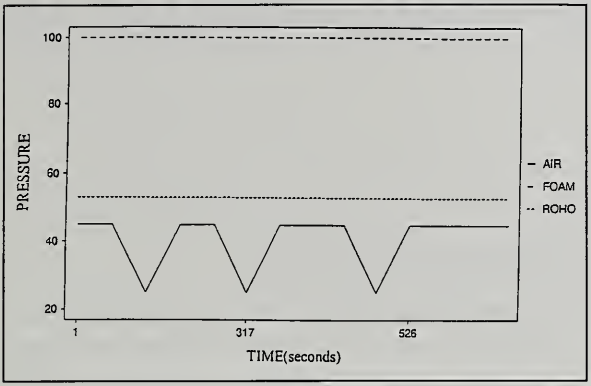
RESULTS

Graph 1 represents the average capillary refill over the participants' ischial tuberosities while seated on each apparatus over a 10 minute time interval. The data was analyzed by conducting a Friedman's Test with a level



SUBJECT #	1	2	3	4	5	6	7	8	9	10
■ ROHO	0.800	0.124	2.527	0.000	0.008	0.884	0.141	0.009	0.028	1.097
▨ FOAM	1.644	0.046	2.410	0.271	0.008	1.106	1.603	0.151	0.192	0.527
■ LOW AIR LOSS	4.043	2.900	3.678	2.474	1.123	2.969	1.991	2.285	3.633	2.936

Graph 1



Graph 2

of significance set at .05. The mean capillary blood flow was significantly higher (F = 55.02, p = .0000) when using the SALSS compared to the ROHO or foam cushion.

The pressure readings for each participant were analyzed and graphically plotted by computer software. Graph 2 represents pressure data characteristic of the entire participant population. Pressure readings over participants' ischial tuberosities were significantly less on the SALSS than on the ROHO or foam cushion.

CONCLUSION

While many factors, both intrinsic and extrinsic, have an impact on the development and the healing of pressure ulcers, the chief factor is prolonged pressure that interferes with nutrient blood supply to body tissues. Management of tissue loads is critical. The statistically significant differences in capillary blood flow to tissue when using the SALSS compared to other support surfaces strongly supports this intervention as an effective prevention and treatment measure for pressure ulcers.

Details of the standard procedure for testing as well as additional graphic data can be obtained from the author upon request. ❐

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THE VOCATIONAL REHABILITATION OF MEDICINE*

ALVA W. WHITEHEAD, M. D.**

The concept of vocational rehabilitation is familiar to us in referral of our impaired patients to the process of beginning life anew in the midst of dysfunction. As a profession, many of us feel medicine is dysfunctional now. As individuals within the profession, many of us are dysfunctional, however, through the revival of the concept of medicine as a vocation, we can renew our strengths, rehabilitate our weaknesses, and redirect our future.

Medicine is a profession; however, should it first and foremost be a vocation?

The word "profession" originally applied to faith or belief in God and evolved into a certain guild of study to which one committed oneself. Now, profession usually means just a job of high prestige and/or self government.

When did you first know you wanted to be a physician? When did you publicly "profess" that desire? Maybe it was when you attended a hurt pet or bandaged a friend's bruised knee. Perhaps the family doctor whom you trusted gave you a dream to also help. But "profess" it was—you professed physically, financially, mentally, morally, and spiritually, and committed to an arduous task and tedious path.

Fifteen years ago, a friend asked, "Why are you a physician? Were you 'called' to be one?" Since then, I too have frequently asked those questions, especially with the winds of change that toss us to and fro in the profession today.

VOCATION DEFINED

Os Guinness writes, "The Christian notion of a calling or vocation is the conviction that human existence contains a life—purpose and a life-task, namely, that all we are and all we do—our identities, gifts, and responsibilities—have a direction or dynamic because they are lived out in response to a calling or summons of God." This gives vocation a different emphasis than job, provider, FTE, occupation or even profession. The initial response to "calling" or vocation for a physician may seem inappropriate, particularly if the world is viewed in a dualistic manner where the spiritual realm and the physical realm never meet. Indeed, for some there is only a knowledge of the physical realm. However, Guinness is either right or wrong. Either there is or is not transcendence. It is not a matter of whether we believe in it or not that makes it real.

It is that question of "call" that is so deceptively difficult to answer, perhaps because it is not one question but four: Called from what? Called to what? Called for what? Called by whom?

CALLED FROM WHAT?

The Hippocratic Oath obviously separated physicians from a culture in which they lived to be different; otherwise, there would be no need for the Oath. What could we be called from today? Actually, all of us have been living in a cultural revolution—but just as "if you want to know what water is, don't ask the fish"—we have been so immersed in it we fail to see it. The previous cultural revolutions, evident from a distance of time, are The Reformation of the 16th Century that lead to the spiritual man; The Enlightenment of the 18th Century that lead to the rational man; The Romanticism of the 19th Century that lead to the idealistic man; and the Modernity of the 20th Century that has led to the technical man.

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*Presented at the nondenominational devotion at the Annual Meeting of the South Carolina Medical Association, Charleston, SC, April 26, 1998.

**Address correspondence to Dr. Whitehead at 800 E. Cheves Street, Suite 200, Florence, SC 29503.

In his book, *The American Century*, Norman Cantor defines modernism as "a cultural revolution flourishing in the first four decades of this century that emphasized ahistorical, non-narrative or synchronic ways of thinking, the microcosmic dimension, self referentiality, and moral relativism." As Cantor points out, modernism "cares little for history and is in fact hostile to it." Modernism "departed from the macroscosmic thought of the 19th Century to the microcosmic dimension." Society became more interested in the nature in man as opposed to the nature of man. The world was viewed through a microscope, indeed, an electron microscope or else figuratively through a telescope backwards. There was a "tendency for the fragmented, fractured and discordant."

There was a "denial of a predetermined pattern and rejection of philosophical idealism." Modernism was very "functionally oriented." In ethics, there was a "tendency toward moral relativism and a departure from a normative code of ethics and there was a tendency toward cultural despair." There is a shift from ethics etched in stone to Etch-A-Sketch ethics. For medicine, one can see the devastation resulting from these trends. The past is needed to understand the present. This is not just nostalgia, and even if it were, worse than nostalgia is amnesia. Mankind now is in danger of cataloging nature but unable to appreciate the beauty of its creation. We see the disease, not the person ("the heart in room 508," "the stroke in room 718"). A utilitarian view of life has developed with a functional orientation of determining life's value ("that life is not worth living"). A risk has been that if we can name and categorize it, we can claim to understand it and then no longer really need to appreciate it.

Modernity has taught us that the brain is the only organ through which truth is found. If something cannot be reasoned or measured, it is not true. The "heart" we failed to see is an organ of reality. Blaise Pascal (the 17th Century mathematical genius, grandfather of the computer, philosopher, theologian, and one of the greatest of the French Prose writers) wrote, "the heart has reason that reason knows not." He learned to limit his reason to allow room for his faith. J. M. Houston points out in *The Mind on Fire,* "Pascal realized that reason alone could not understand all of reality. Knowledge cannot ascertain the whole; it can only replace the wholeness with a pretension to the whole. In fact, the whole is replaced by reduction." In losing that sense of wonder and awe for the whole, we lost the knowledge of eternity and transcendence.

Soren Kierkegaard gave a beautiful analogy. He describes a man traveling slowly on a clear night in a horse drawn cart with a lantern that allows him to see just a few feet in all directions. There is enough light for his immediate need, but as the lantern goes out and the man's eyes adjust, a whole universe opens up. Reductionistic analysis limits rather than liberates the boundaries of knowledge, intellect, and reason. Such is the lesson of Plato's parable of *The Cave.*

As John Patrick, M. D., points out, "Aristotle taught that there are only three principle reasons for knowledge—truth, morality, and technique—in that order. Modernism teaches that knowledge is only for technique and utility, morality is only personal, and truth is only relative." Would our world be different if we applied knowledge to truth, truth to morality, and lastly, truth and morality to technique?

Modernity's personal and cultural consequence is to proclaim "the death of God" that Nietzche anticipated and the dissolution of transcendence. With that, the fundamental foundation and the framework of the meaning of all morality is then lost.

For physicians, the Hippocratic Oath should provide an internal gyroscope to keep us on balance in a world that spins us as a compass surrounded by countless north poles, each urgently calling for our attention and claiming to direct us. Adherence to the Oath is the substance that holds together the medical culture. It is a point of reference.

CALLED TO WHAT?

Transcendent accountability to a higher authority is the first and foremost element of the Hippocratic Oath. The "gods" of Hippocrates were inventions of mankind. Although they pretended to transcend mankind, they could not. We need real transcendence to the one true God. But if we continue to view life through the prism of modernity, we can lose that sense of transcendence.

Despite his writing for the political sphere, Vaclav Havel (The Czech President) in *Summer Meditations* captures the importance of the transcendence beautifully:

> "Genuine politics—politics worthy of the name and the only politics I am willing to devote myself to—is simply a matter of serving those around us: serving the community, serving those who will come after us. Its deepest roots are moral because it is a responsibility, expressed through action, to and for the whole, a responsibility that is what it is—a "higher" responsibility only because it has a metaphysical grounding that is, it grows out of the conscious or subconscious certainty that our death ends nothing, because everything is forever being recorded and evaluated somewhere else, somewhere "above us," in what I call "the memory of being"—an integral part of the secret order of the cosmos, of nature, and of life, which believers call God into whose judgement everything is subject."

CALLED FOR WHAT?

Does the white coat, scalpel, and stethoscope offer a greater opportunity? Putting aside the obvious medical responsibility for individual patients, a story by the late Peter Marshall is applicable. The title of the story is *The Keeper of the Spring* and originally applied to motherhood.

A small Alpine village derived its water from a high mountain spring. A small stipend was paid to a hermit to keep the spring clear of weeds and debris and keep it freshly flowing. As the village prospered it felt less need for the expense of the keeper of the spring and eventually suspended payment and discharged him from service. The villagers' water supply slowly became tainted, fish died, and children became sick. Finally realizing their mistake, the city leaders regained the services of the hermit to once again have a community which prospered.

Medicine has traditionally been one of those "keepers of the spring" for communities. Whether it be "Doc" on *Gunsmoke* or *Marcus Welby*, there was a palpable significance outside of a doctor/patient relationship. What springs are in need of our attention now—education, sexually transmitted diseases, teenage pregnancy, adoption, domestic violence, care of the elderly, latch key kids, parenting in general, etc. Instead, we have allowed ourselves to become "gate keepers." Indeed, much of this is due to some who have confused liberty and autonomy for unrestricted license for personal gain, but that is a result of our reluctance to clean our own springs.

We succumbed to the modern interpretation of the role of the physician as a "magician," pushing our technical wares and gismos and tricks. When our magic to give life runs out, we find ourselves pressured to pull out the magic to give death by physician assisted suicide. We have even lost our traditional knowledge of the naturalness of dying and failed to lovingly shepherd our patients and families to this rest. Medicine is an opportunity to heal, not just in the physical sense, but to comfort and touch in the emotional and spiritual sense. This changes individuals and communities. When we place the emphasis outside ourselves as Havel suggested, we then receive that sense of calling.

CALLED BY WHOM?

This is the critical question. Without a caller, there is no vocation. Ears can become deaf to this call. A belief that knowledge can only come from reason and not from revelation is an effective ear plug. I am not being "unreasonable" here to suggest that there is only reason or revelation. Reason, however, must be based upon correct presuppositions. Reason which pretends to understand all mystery is the enemy.

Revelation requires a Revealer outside of each of us. Think back on your own journey. How much was truly determined by and under your control? Could there have been a "Hand" working behind the scenes? Did you pick your parents or your country of origin? Is your native intelligence due to personal effort?

Was that teacher who became a mentor, the community that nurtured you, your standing in the family, your survival in that car wreck, your supportive spouse, your friend who helped you along all chosen by you? Were we equipped unknowingly and undeservedly gifted to become physicians? How much autonomy do we really have? There should be much more room for gratitude in our lives and much less for pride. Many of us unfortunately do consider ourselves to be self-made men and women and don't we generally worship our creators?

CONCLUSION

Consider the possibility that we are gifted for a higher purpose. It is a calling. There is a compass within the profession to guide us. We have covenants with our patients and communities, not contracts. We are keepers of the springs of life, not merchants of medical magic. We are keepers of the springs of life, not merchants of death when the magic fails. We are keepers of the springs of life, not gate keepers. ❐

ACKNOWLEDGEMENTS

I would like to thank F. Richard Ervin, M. D., and Hilton Terrell, M. D., for their assistance and review of this essay and John Patrick, M. D., for many of his thoughts through lectures which are influential in this article.

FOR FURTHER READING

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2. Cantor Norman: *The American Century.*
3. Houston JM: *Mind on Fire.*
4. Havel Vaclav: *Summer Meditations.*

THE PHYSICIAN ASSISTANT IN SOUTH CAROLINA

D. G. ASKINS, JR., M. D.*
VALERIE T. WEST, R. R. A., ED. D.

HISTORY OF THE PROFESSION

The origin of the physician assistant (PA) can be traced to the new health practitioner movement of the early 1960s during which the PA concept emerged from a combination of events. The chair of the Department of Medicine at the Duke University Medical Center, Dr. Eugene Stead, Jr., attempted to train and use clinical nurses in specialty units to increase patient accessibility to medical care. That effort failed because of the lack of support by the National League for Nursing. At that time, experienced hospital corpsmen and combat medics returned from service in Vietnam with no civilian job equivalents or suitable health career pathways in the United States.[1,2]

Denied the use of nurses, Dr. Stead turned to another source of personnel, ex-military corpsmen. The education model for physician assistants was based in part on his experience with fast track training of doctors during World War II. According to his concept, PAs "would be trained to assist the doctor...in such a way as to facilitate better utilization of available physicians and nurses."[1] Shortly after this time, nursing developed the separate and parallel profession of nurse practitioner at the University of Colorado.[3]

THE ROLE OF PHYSICIAN ASSISTANTS

Physician assistants are licensed health professionals who practice under physician supervision. They provide a broad range of medical services that would otherwise be provided by a physician. Some 40 states and the District of Columbia have granted PAs prescription writing privileges, including South Carolina.

State laws recognize and regulate PAs in 49 states (not Mississippi). To be certified, PAs must graduate from an accredited PA program, pass a national certifying examination, and be licensed by the state in which they practice. In South Carolina, licensing and regulation of the PA profession is done by the South Carolina Board of Medical Examiners. To maintain certification, the PA must log 100 hours of continuing medical education every two years and sit for a recertification exam every six years.

The physician may delegate to the PA those medical duties that are; within the physician's scope of practice, the PA's training, and approved by the state licensing board. According to the Essentials and Guidelines for an Accredited Educational Program for the Physician Assistant, the general duties of the physician assistant fall into six categories: evaluation, monitoring, diagnostics, therapeutics, counseling, and referral. PAs can elicit a detailed and accurate history, perform an appropriate physical examination, delineate problems, and record and present data. They can assist the physician in conducting rounds, recording progress notes, dictating discharge summaries, and assisting in the continuity of care. They can also order and interpret common laboratory, radiological, cardiographic, and other routine diagnostic procedures, obtain cultures, and perform minor biopsy procedures.[4]

PAs may also develop and implement treatment plans, write prescriptions, perform routine procedures as injections and immunizations, suture and splint, assist in surgery, and respond to life-threatening situations. They are able to instruct and counsel patients regarding therapeutic regimens, compliance, normal growth and development, family planning, emotional problems, and health maintenance. Additionally, they facilitate the referral of patients to consultants, community health agencies, social services, and home health nursing.[4]

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*Address correspondence to Dr. Askins at the Medical University of South Carolina, Department of Clinical Services, 171 Ashley Avenue, Charleston, SC 29425.

In all, it has been estimated that PAs can perform 80 percent of the services provided by a physician, but always under the supervision of the physician.[5] "Supervision does not mean over-the-shoulder physician examination of all patients seen by the PA."[6] Supervision requires that an interdependent relationship has been established. In this type of relationship, the physician depends on the PA to treat the patient in the same manner as the physician would, while the PA depends on the physician to provide the consultation and supervision needed to ensure that all patients receive appropriate care.[6]

CURRENT PRACTICE

In 1997, there were more than 30,000 graduates from accredited PA programs. In that year, PAs managed more than 130 million patient visits. In 1992, under the direction and supervision of physicians, PAs wrote 165 million prescriptions, or eight percent of the total prescription market in the U.S.[7] In a 1997 survey of physicians, more than half of all practicing physician assistants reported that they work in primary care specialties. Of these, 38 percent practice in family medicine, nine percent in general internal medicine, three percent in obstetrics and gynecology, and three percent in pediatrics. Just under 19 percent of all practicing PAs reported that they practice in general surgery and the surgical subspecialties, although 31 percent reported that they assist in surgery. PAs work in virtually all medical settings. The recent survey also indicates that the most common employers of PAs are: group practices (36 percent); private and public hospitals (26 percent); and solo-physician offices (10 percent).[8]

PA SALARY

According to the 1997 AAPA Physician Assistant Census,[9] the mean total annual income for full-time PAs in 1997 was $63,910, and in 1996, was $61,493, representing an increase of 3.9 percent. In contrast,

Table 1*
Total Mean Income from Primary Employer for 1996 and 1997, and Percent Change, By Years in Clinical Practice as a PA**

	1996	1997	%Change
Total	$61,493	$63,910	3.9%
Under 1 Year	$52,740	$55,081	4.4%
1-3 Years	$55,942	$58,494	4.6%
4-6 Years	$59,988	$62,346	3.9%
7-9 Years	$62,414	$64,753	3.7%
10-12 Years	$64,299	$66,791	3.9%
13-15 Years	$65,178	$68,225	4.7%
16-18 Years	$66,825	$68,911	3.1%
Over 18 Years	$66,578	$69,928	5.0%

* *AAPA News* 1997; 18(12):12.
** Excludes active duty military PAs, self-employed PAs, and PAs who report working fewer than 32 hours per week for their primary employer.

Table 2*
Total Mean Income from Primary Employer for 1996 and 1997, and Percent Change By General Field of Primary Specialty**

	1996	1997	% Change
Total	$61,493	$63,910	3.9%
Ob/Gyn	$57,535	$59,543	3.5%
Pediatric Subspecialties	$58,780	$59,741	1.6%
General Pediatrics	$59,253	$59,823	1.0%
General Internal Medicine	$57,833	$60,051	3.8%
Family/General Medicine	$58,547	$61,060	4.3%
Other***	$59,223	$62,005	4.7%
IM Subspecialties	$59,895	$62,095	3.7%
General Surgery	$62,194	$62,975	1.3%
Industrial/Occupational Medicine	$63,933	$65,966	3.2%
Emergency Medicine	$67,285	$70,361	4.6%
Surgical Subspecialties	$68,771	$71,384	3.8%

* *AAPA News* 1997; 18(12):12.

** Excludes active duty military PAs, self-employed PAs, and PAs who report working fewer than 32 hours per week for their primary employer.

*** Specialty field represented by "other" include allergy, anesthesiology, dermatology, geriatrics, ophthalmology, otolaryngology, pathology, physical medicine/rehabilitation, psychiatry, public health, radiology, substance abuse, and other unspecified specialties.

the rate of inflation, as measured by the Consumer Price Index, was 2.2 percent. The variation in the earnings among groups of PAs are defined by years of experience (Table 1), specialty of practice (Table 2), as well as size of population served, whether call is taken and whether the PA has administrative responsibilities.

PA incomes tend to be higher than national average in populations of one million or more and lower than national average in populations less than 50,000. PAs who take call (38 percent) earn, on average, 10.6 percent more than PAs who do not.

EDUCATION

Today, there are over 90 accredited PA programs in the U.S. Some programs offer certificates; others associate, bachelor's and masters' degrees. Before matriculation to baccalaureate programs, students have to complete the equivalent of two years of undergraduate-level biological, social, and behavioral science prerequisites. The PA program at the Medical University of South Carolina (MUSC) is a bachelor of science degree program which spans 27 months. The first 15 months are devoted to preclinical didactic studies and include courses such as anatomy, physiology, pharmacology, clinical medicine, community health, ethics, and laboratory medicine. The final 12 months are spent in physician supervised clinical settings in both inpatient and outpatient areas.

The current program at MUSC began in 1994, with the first class graduating in 1996. A previous program in the 1970s, funded by a federal grant, was terminated in 1983 when federal funds were discontinued. A master's level option has recently been approved by the South Carolina Commission on Higher Education for post-profession education of PAs.

PRACTICE PATTERNS

It is reasonable that PAs work in states that

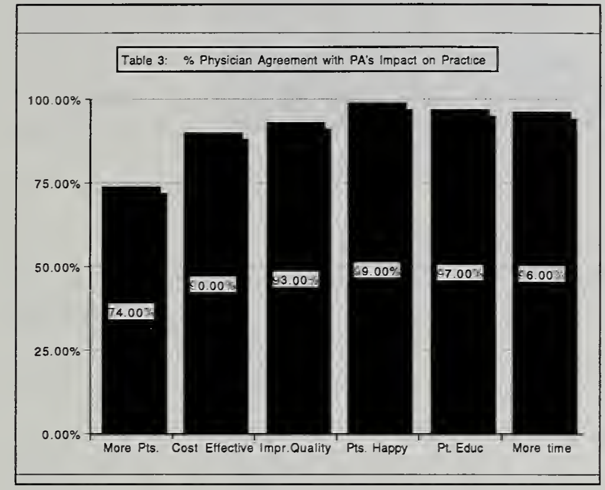

Table 3: % Physician Agreement with PA's Impact on Practice

have more favorable practice laws and regulations. Laws were not conducive for employing PAs in South Carolina until about 1993, when the state Legislature passed regulations granting PAs the privileges of diagnosing, treating, and writing prescriptions. Before then, all patients had to be seen by the physician and the physician had to sign all prescriptions.

There is a huge disparity in the number of practicing PAs in South Carolina as compared with its neighboring states (estimates from their respective licensing bureaus indicated North Carolina with 1,400; Georgia, 992; and South Carolina, 100). Though this discrepancy is in part due to the restrictive regulations in the past, a lack of knowledge of the many benefits created by hiring a PA by South Carolina physicians could be a factor. To better delineate the experience of physicians with PAs in South Carolina, a survey was conducted by the faculty at the MUSC PA Program. The purpose of the survey was to determine level of agreement about the positive impact of PAs on the practice of their supervising physicians.

STUDY METHODOLOGY

Questionnaires were sent to the supervising physicians of the 102 known practicing PAs in South Carolina. Information regarding the number of PAs employed by each physician or group and length of employment was requested. The primary emphasis was on employer satisfaction and perceived patient satisfaction. Six questions were asked:

1. Has having a PA in my practice generated a larger patient population?
2. Has the PA been cost effective?
3. Has the PA improved the quality of patient care?
4. Are the majority of my patients happy to see the PA?
5. Does the PA provide a great deal of patient education?
6. Has the PA in my practice made my time more productive?

A graded response was requested: 1 (strongly disagree), 2 (disagree), 3 (undecided), 4 (agree), and 5 (strongly agree).

RESULTS AND DISCUSSION

The response rate was 64 percent. The average number of PAs employed by the contacted physician (or group) was 1.6, ranging from one to five. The average employment time was six years, ranging from five months to 22 years. The response to each question was overwhelmingly favorable as seen in Table 3.

Seventy-four percent of the respondents indicated that they agreed or strongly agreed that the PA had generated a larger patient population. The 1986 United States Congress Policy Analysis on Physician Assistants, Nurse Practitioners, and Nurse Midwives summarized studies on physician assistant practice. The Report indicated that studies conducted in the 1970s showed that a PA will see 50 to 75 percent of the number of patients that the physician sees. They also concluded from prior studies that the PA will spend more time with each patient and do more patient education.[10]

Ninety percent of respondents to this survey agreed that the PA had been cost effective. Frequently, the PA is delegated duties such as dictating discharge summaries, histories, and physicals that free up the physician to see more patients. The increase in the number of patients seen more than makes up for the cost of the PA.

Ninety-three percent of respondents agreed or strongly agreed that the PA improved the quality of care. There may be several reasons for this. Certainly the presence of a PA allows the physician to spend more time with the sicker patients. The extra time the PA spends on patient education may also contribute to increased compliance.

There was a high degree of perceived patient satisfaction. Ninety-nine percent of respondents indicated the majority of the patients were happy to see the PA. This supports studies reported on by the Bureau of Health Professions's Advisory Group on Physician Assistants and the Workforce in 1994.[5] They reported high levels of patient satisfaction (90 percent), and at times, over 95 percent. Crane reports on the results of a Kaiser Northwest membership study in 1992 that reported levels of satisfaction with the PA nearly equaling to and sometimes exceeding the patient's satisfaction with the physician.[3]

Ninety-seven percent of respondents to this study agreed that the PA provides a great deal of the patient education. The PA is educationally prepared to counsel patients. Reports on prior studies have concluded that PAs spend more time counseling patients in such areas as obesity, diabetic foot care and diet, hypertension, and medications.[10] Ninety-six percent of the physician respondents agreed the PA had made their time more productive.

CONCLUSIONS

These responses indicate South Carolina physicians agree with the positive impact their PAs have had on cost effectiveness, quality of care, patient satisfaction, patient education, and increased productivity. It would be expected that greater use of PAs by South Carolina physicians would result in the same levels of satisfaction.

Whether performing physical exams, discussing medications with patients, or assisting in surgery, physician assistants are making an important and vital contribution to the quality of health care in this country. PAs and other non-physician providers have proven to be cost effective for a practice and capable of delivering a significant portion of primary health care services.

SUMMARY

This article provides an overview of the physician assistant profession in general and in South Carolina. Information on the educational program at the Medical University of South Carolina and the results of a study of the satisfaction and contribution of the physician assistant as perceived by a sample of South Carolina supervising physicians is included. The study demonstrates that the physician assistant makes an important contribution to health care in South Carolina. ❐

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Editorials

MEDICINE'S VOCATIONAL REHABILITATION

When anxieties and conflicts beset us, it helps to see ourselves as participants in wider societal trends—bit players in a larger drama. To all readers, I commend this issue's thoughtful essay by Dr. Alva W. Whitehead of Florence, originally given as the nondenominational worship service at the 1998 South Carolina Medical Association Annual Meeting. If we often feel hassled and dysfunctional, Dr. Whitehead suggests our discomfort owes in large measure to the fallout from the "modernity" of the early 20th century. Infatuated with technology, hostile toward history, and cynical toward normative codes of ethics, modernism would define medicine in purely utilitarian terms. To what, Dr. Whitehead asks, should we then feel called as physicians?

In this vein, I also commend a provocative and sobering book by sociologist Elliott A. Krause titled *Death of the Guilds.*[1] Krause analyzes what has happened since the 1930s to four professions—medicine, law, engineering, and university teaching—in five countries: the United States, Britain, France, Italy, and Germany. He advances the thesis that professions everywhere are losing guild power (read: autonomy) to the forces of government and capitalism. The professions will not die, but they may lose their souls: "Not only have the moral functions of modern professions effectively disappeared, but the professions hardly seem to exist as unified entities in their own right as the 'occupational communities'...[of] the 1950s."[1, p. 283] Put baldly, government and capitalism have divided and conquered.

The scenarios differ from country to country, but the outcomes are similar. Until the 1930s, governments and businesses were largely indifferent toward medicine, which theretofore enjoyed autonomy. Physicians might be poor, but they controlled their own destinies. Today, medicine everywhere is not only more closely-regulated by government but also coerced by capitalism's concern over health care costs. Especially in the United States, both capitalism and government have become increasingly centralized since World War II. Medicine has not. We have therefore lost a major component of guild power: the ability to control our own workplace. Those frequent demands for "pre-authorization," to cite but one nuisance in our daily lives, are merely symptomatic of these worldwide trends.

There are obvious parallels between two professions with which we are familiar: medicine and law in the United States. Until the 1960s, practitioners of both generally enjoyed autonomy, prestige, reasonable incomes, and a high sense of community rooted in codes-of-ethics. Then their numbers swelled, and the new graduates increasingly specialized and subspecialized. Large income gaps developed between the elite and the rank-and-file. However, the high income earners were valued more for their technical expertise than for their innovations. Widening rifts between university faculties and private practitioners further eroded professional solidarity. New members tended to enter the workforce as salaried employees. All of these trends are symptomatic of declining guild power and its "culture of professionalism."

Yet Krause sees American medicine as a special case: "No profession in our sample has flown quite as high in guild power and control as American medicine, and few have fallen as fast."[1, p. 36] The guild power of American medicine peaked during the Truman and Eisenhower administrations. The passing of

Medicare-Medicaid legislation (1965) began a process whereby state and capitalism would insist on oversight in the name of cost control. The profession lost political power as American Medical Association membership declined from 73 percent in the early 1960s to less than 50 percent today. It lost control over the number of trainees as government insisted on more doctors. It lost much of its former authority over competing professions, and it lost control over its market. Government and capitalism began to pit groups of physicians against each other. Krause concludes: "Still retaining some of its guild power, medicine is increasingly on the defensive on all fronts."[1, p. 49]

Many people would applaud declining guild power as the triumph of populism over elitism—the common people over the moneyed few. Krause does not. He suspects that these huge forces at work "represent a threat to the health and welfare of us all."[1, p. 286] He supports the thesis that professionals' contracts should be with those individuals in need of help, and that these contracts should be unfettered by outside forces that would compromise the ability to serve. Consumers lose when professional ideals are captive to the competing (and changing) ideals of government and business, state and capitalism. Yet that seems to be what is happening everywhere.

Can anything be done? Dr. Whitehead answers yes: We should pledge renewal to the ideal that medicine is indeed a calling to a higher purpose. We should pledge commitment to participating at medical gatherings where, collectively, we can hear messages such as those contained in Dr. Whitehead's nondenominational service. We should pledge commitment to the ideal of professional solidarity, seeking to resolve the many differences that divide us. We should pledge to honor our heritage and to face our future with collective resolve.

—CSB

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Guest editorials reflect the opinions of the authors and do not necessarily represent the opinions of the officers and trustees of the South Carolina Medical Association.

—CSB

MODERN HEALTH CARE ECONOMICS

Living near Charlotte, North Carolina, in the shadow of very large banking institutions which have undergone waves of consolidations and mergers, set me to thinking about the parallel consolidations occurring in the health care, telecommunication, and banking industries. In fact, if we examine the issues further, consolidation and the production of enlarging corporations and organizations are the *sine qua non* of the twentieth century. Big government and big business (Eisenhower's military/industrial complex) would seem to be the direction toward which modern society is inexorably being driven, and now Daimler/Benz is buying Chrysler. But wait! The public is unhappy with big institutions. The complaints against big impersonal banks and financial institutions are rising rapidly. Too much red tape and too many fees are examples of the problems consumers experience. Far too much intrusive government regulation and red tape combined with a generally insensitive bureaucracy and newly proposed user fees characterize our federal government. Social and economic history teach us that great, big, giant, monolithic organizations do not help us. Mergers and consolidations occur in waves and are often followed by divestiture as companies become far too large and inefficient because economies of scale do not increase infinitely. Really big organizations have to break up because the relentless efficiencies of the free market economy demand that basic economic laws be followed.

Nationally, there are hundreds of HMOs, thousands of group practices, and hundreds of hospital and nursing home organizations which are engaged in a buy, sell, and merger frenzy. In South Carolina, several proposed mergers are underway, others have failed at the ballot box, and others are still in their watchful waiting and litigation stages. The reasons for health care mergers are the same as those for other business mergers, i.e., consolidation and less duplication of resources; increased size enough to attract superlative management talent and capital; and increased economies of scale allowing more efficient operation with lower cost. Somewhere tossed in there is usually the humbug of better service and quality care.

But hold on just a minute! We are not in the business of manufacturing automobiles, lending money, or fiberoptic communications. We are in a personal service industry which entails the one-on-one delivery of health care. Our business deals with lives and not interest rates. The traditional business framework emphasizes finances and physical assets and accounts for things that can be easily quantified. Even in the late twentieth century, management, financial, and accounting concepts and structures persist that have their origins in the industrial revolution.

Corporate health care accounting views physicians as expenses which need to be reduced in order to improve the bottom line. There are all sorts of ways to disguise health care financial practices with names and numbers such as covered lives, average length of stay, medical loss ratio, per member per month cost, fee for service, discounted fee for service, etc. As a result, it is easy to fall into the trap of thinking that medicine is just another business and the product is "health care."

Our field, our industry, our profession—medicine—is more than just a group of people and physical assets producing "health care." Our success as a profession depends upon the recognition that its intellectual and economic viability reside in its individual members, their diversity, and the consistency and quality of the relationships that they have one with another and with their patients (not clients, not customers!).

The technological wave of innovation that has characterized the last 50 years has created an intellectual democracy in western society that has given health care consumers and patients phenomenal access to leading edge medical research and information concerning diagnostic and treatment modalities. Newspapers, magazines, radio, multichannel cable and satellite television, and the Internet have created virtual communities of patients eagerly pursuing the answers to their own individual medical questions.

However, at the same time, the public, health care consumers, and patients are feeling increasingly alienated from the health care establishment and from their physicians. Could it be that we have been fooled by the siren song of the obsolete financial and accounting structures of the industrial age that have led us to value the fiscal and physical structures of our industry and profession over those intangible emotional and intellectual assets so valued by our patients? More than any other business or profession, the provision of medical care by physicians is built on a relationship of mutual trust and caring supported by a structure of competent and informed practice and experience with a foundation of sound and thorough medical education.

The current boom in the stock market tells us that Wall Street highly prizes companies with abundant and tangible assets such as intellectual capital and strong customer relationships. The physicians' abilities to develop longlasting professional relationships with patients, their possession of intellectual capital and information which they may use to serve their patients, and their ability to form strong alliances with other physicians, professionals, and organizations provides us with competitive advantages to succeed in the future in a way that large monolithic organizations cannot. We only have to use them.

R. Duren Johnson, Jr., M.D.
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Letters to the Editor

Dear Sir:

I very much enjoyed the article, *Renal Artery Stenosis: Clinical Picture, Frequency, and Management* which appeared in the July issue of *The Journal of the South Carolina Medical Association.* I found it very timely in discussing the very prevalent, yet often underdiagnosed problem of renal artery stenosis in South Carolina. Their manuscript does an excellent job of reviewing the excellent results often obtained by balloon angioplasty with or without stenting of the renal arteries.

However, I was very troubled by some of their conclusions reached in this review, especially in the comparison of renal artery angioplasty with direct surgical renal revascularization. For example, they concluded that the restenosis rate of 16 percent reported with renal artery surgery was not significantly better than that associated with percutaneous intervention (11.2 percent), but simple statistical analysis of their own data by chi square (15.13, $P<0.001$) or odds ratio (OR 0.66, 95 percent CI 0.54-0.81) confirms that the restenosis rate associated with angioplasty is significantly greater. Furthermore, while the collection of studies included in their review is not listed, I was disappointed to see that the only prospective, randomized study comparing percutaneous transluminal renal angioplasty with surgical reconstruction of atherosclerotic renal artery stenosis, was not mentioned.[1] As reported in this study, using intention-to-treat analysis, the primary patency rate at two years was 62 percent for percutaneous transluminal renal angioplasty versus 93 percent for surgical revascularization, and 17 percent of patients initially randomized to balloon angioplasty ultimately required surgical intervention while 20 percent of the initial technical successes required repeat angioplasty. Intraluminal stents were not used in this prospective study, and no prospective, randomized trial has compared angioplasty with stenting to surgical therapy alone. Contemporary non-randomized comparisons of the results of percutaneous and open surgical interventions are probably inappropriate because operation is increasingly being reserved for patients with disease not amenable to angioplasty. With this in mind, I would hesitate to agree with the authors' conclusions that percutaneous treatment of renal artery stenosis is "perhaps more cost effective than the surgical counterpart," especially since no data concerning the relative costs of these treatment modalities alone or in combination with any subsequent interventions has been included.

I would again compliment Drs. Baute' and Sohail for bringing this important manifestation of atherosclerotic vascular disease to the attention of South Carolina physicians.

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Dear Sir:

This is a reply to Dr. Brothers' letter in reference to our article titled *Renal Artery Stenosis: Clinical Picture, Frequency, and Management*, which was published in the July issue of *The Journal.*

Our paper was not meant to be a formal metaanalysis; therefore, it should not be considered an objective defining landmark between surgical versus percutaneous therapy for renal artery stenosis. Instead, it was intended for "bringing this important manifestation of atherosclerotic vascular disease to the attention of South Carolina physicians," per Dr. Brothers' own comment about our paper. Clearly, we meant to bring to light an overview of a disease process frequently neglected because of the false impression of being rare and exotic.

Our experts in statistical analysis have assisted us in understanding Dr. Brothers' "single statistical analysis" in reference to the rate of restenosis among surgical and percutaneous cohort. Indeed, we do not dispute his point; however, in review of our own additional data, we also found that 77 percent of patients are helped by renal stenting as compared with 75 percent of surgical cases. But, again, these data are only mentioned to bring the point that both techniques are equally useful on the management of renal artery stenosis. In reference to his comment about the only randomized study[1] comparing the two approaches, we did not cite this study based on the fact that it randomized patients to have simple angioplasty versus surgical repair, which by today's standards, performs very poorly at any vascular bed, including the iliac blood vessels. Instead, we reviewed and centered our attention on studies that used the new stenting techniques.

About the cost effectiveness issue addressed in Dr. Brothers' letter, we want to cite two references that we were aware of prior to the publication of the paper, but refused to include because of the broad overview of our paper. [2,3,5]

Finally, we want to mention the fact that in this arena, like in many other therapeutics, there are controversies about the best regimen or modality of treatment, but ultimately the simplest, safest, and most cost effective therapy shall prevail. In our view, the currently available approaches are complementary instead of exclusive of each other. For example, using stenting/dilation post-transplant stenosis should prove to be easier than a surgical reintervention let alone the degree of morbidity associated with repeat surgery. We can not lose track of the fact that coronary artery disease is found in over 50 percent of patients who are found to have renal artery stenosis[4] and account for the higher reported mortality as compared with percutaneous interventions.

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On the Cover

JAMES CARLISLE MCLEOD (1897-1947)

The president of the South Carolina Medical Association for the 1946-1947 term was James Carlisle McLeod of Florence, who in 1913, at the age of 15, graduated as valedictorian from Florence High School. He went on to receive his M.D. degree from Cornell University in 1922, and after two years on the Second Surgical Division at Bellevue Hospital in New York City, Dr. McLeod returned to Florence to enter the practice of surgery with his father, Frank Hilton McLeod, M.D.

Dr. J. C. McLeod's tenure as president of the South Carolina Medical Association coincided with the beginning of the expansion of the Medical College in Charleston. Sensing the significance and necessity of this movement, he organized a statewide committee of members of the medical profession (nicknamed the "Committee of 17") to study the many questions involved. He then presented the case for enlargement of the college to the General Assembly in joint session. The eloquent and dynamic presentation elicited a prompt endorsement of the entire program.

Bitterly opposed to government maneuvers to regiment the practice of medicine under bureaucratic control, Dr. McLeod spoke frequently against such efforts. He was one of the leaders in formulating (and putting into effect) the Ten Point Program of the association which attracted nationwide commendation.

Dr. McLeod argued repeatedly that members of the medical profession should take a more significant part in the formation of governmental policies, and he acted on his "preaching" by entering the race for Governor in 1946 against Strom Thurmond. Dr. McLeod made a remarkable showing for a first attempt at political office.

Community service at home in Florence included seats on the Board of Directors of the YMCA and the Guaranty Bank and Trust Company, two years as president of the Pee Dee Council of the Boy Scouts of America, trusteeship of Coker College in Hartsville, and membership on the Board of Stewards of the Central Methodist Church. In addition, he was an active member of the American Legion, the Rotary Club, and the Country Club of Florence where he served as president for over 15 years. Dr. J. C. McLeod was also chiefly responsible for the great physical growth of McLeod Infirmary in 1935. At the time of his death, he was leading a movement to provide a memorial for veterans who lost their lives in the war from Florence County in the form of an athletic stadium.

He died of a heart attack December 9, 1947, at the age of 50.[1] Senator Olin D. Johnston issued a statement about Dr. McLeod saying that McLeod was "probably South Carolina's most distinguished private citizen" and paid tribute to him as "a healer of the sick and injured, a champion of the rights of man, a fearless critic of abuses in government, and a devoted and loyal husband and father."[2]

Jane McCutchen Brown, Curator
Waring Historical Library

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Alliance Page

LEGISLATION, WHAT CAN WE DO?

Do politicians and politics seem a mystery to you? Does it seem at times that our legislators think, say, and do things that are not representative of our ideals or values? Do you feel helpless? Is there anything a group or we as individuals can do to make a difference? These are questions that have puzzled me for some time. I began to read and learn more about the legislative process, and in doing so, realized that there is a lot to understand. It is not simply the mechanics of the process but all the other things that can influence what is happening, which is not unlike medicine. I compare it to a patient who has appendicitis. There is a standard textbook treatment. However, age and other physical and mental conditions can complicate that treatment and outcome. It is the experience and knowledge of the physician and other professionals involved that bring it to a satisfactory conclusion. The legislative process is similar.

With these similarities in mind, many of us feel that it is more important than ever to begin to learn and understand how to take an active role in the direction that our country is heading. However, the problem has always been how we can assist our members and their spouses to do this. It is not enough to provide the skills to our state alliance/auxiliary members. We want to help each county to share this knowledge with all their members and their spouses. Therefore, we are trying something new this year. Last month, we conducted a Legislative Workshop for all county presidents, legislative chairmen, and all interested county alliance members. The purpose of this workshop was to provide information on how to have a legislative reception in your county. By providing the guidelines and answering questions for our members, our goal was to empower them to go back to their counties and have a reception with their local representatives. This will enable not only alliance members, but also their physician spouses to take an active role in the legislative process and begin to meet and talk to their representatives face to face. This will enable physicians on the local level to share their concerns for their patients and the details of their practice problems with those who are making the laws that govern them and to learn which representatives understand their views. By providing an opportunity to get to know our representatives, we can become their source of information about the state of medicine in our communities. In the social setting, it is easier to relax and share information and develop bonds so that our representatives come to us when they want information on how laws will effect the medical community and your patients.

However, providing the information and sponsoring the event is not enough. You must support the efforts of your spouses by attending the receptions and encouraging your colleagues to do the same. As I have stressed, my theme for this year is HAPPINESS IS CARING, SHARING, AND DARING TO CHANGE. The face of medicine is changing. We may not be happy with that new face if we do not care enough to share our time and knowledge to help shape the changes and the future of medicine.

Alexis Alia, *SCMA Alliance President*
Tracy Crane, *Legislative Chairman;* Martha Holbrook, *Legislative Co-Chairman*

Student Page

The SCMA Board of Trustees voted to extend free membership to medical students and requested that the Editorial Board of The Journal *consider providing a student page in* The Journal, *allowing the medical students a forum for exchanging information and informing the membership of their endeavors and accomplishments. The Editorial Board voted unanimously to allow space in* The Journal *for the medical student page. This is their first contribution to* The Journal *which will appear quarterly.*

—CSB

The South Carolina Medical Association (SCMA) Medical Student Section (MSS) branch at the Medical University of South Carolina (MUSC) in Charleston has had quite a busy year. On the local level, we have been promoting our health education modules to schools and community service organizations. Medical students volunteer their time to go out to the community and talk to the students about three different topics: the dangers of smoking cigarettes, the dangers of alcohol and drug abuse, and what it's like to be a physician. The positive feedback we've received from these children lets us know that we are making a positive impact in their lives.

We have also been busy on the national level. Members of our delegation have passed three separate resolutions at the last two American Medical Association (AMA) meetings. At the December 1997 Interim Meeting in Dallas, a resolution written by Justin Favaro, an MD/PhD student, asked the AMA-MSS to study the strategies used by individual medical schools to increase the percentage of minority medical students. When completed, this study will provide information on how admissions policies have influenced ethnic diversity in medical schools across the country. In addition, at the June 1998 AMA Annual Meeting in Chicago, the AMA-MSS assembly passed two resolutions written by MUSC students. The first resolution, written by Kristopher Crawford, a second year medical student, established that the AMA-MSS utilize the Eddie Eagle Gun Safety Program as a health education module. This program has been used by organizations all over the country to teach children firearm avoidance. Another resolution, co-authored by Justin Favaro from MUSC and Carla DiGirolamo from MCP/Hanneman in Philadelphia, proposed that the AMA issue a moratorium on the use of somatic cell nuclear transfer technology (cloning) for the purposes of human reproduction. This resolution passed both the medical student assembly and the AMA House of Delegates. We hope to continue our efforts on both the national and local levels with the newly elected officers for 1998-99: Co-President: Fletcher Penney, MS II; Co-President: Elizabeth Hearon, MS III; Vice President-Clinical Science: Alice Barker, MS III; Vice President-Basic Science: James Hill, MS II; Secretary: Kristopher Crawford, MS II; Treasurer: Lisa Hart, MS II; Coordinators of the Health Education Modules: Jesse Roach, MS II and Margaret McLees, MS II; MUSC representative to the SCMA: Justin Favaro, MD/PhD,VII. We also have two students holding national positions in the AMA-MSS: Keith Borg, MD/PhD VI, is representing the American Society of Emergency Physicians as the national delegate to the AMA-MSS. Justin Favaro was recently nominated by the AMA-MSS Governing Council to serve on the Committee on Long Range Planning.

We are vigorously promoting the benefits of becoming a member of both the SCMA and AMA to all of the medical students at MUSC. With the support of the SCMA, we will be giving every new student who joins AMA-MSS a scrub shirt with the SCMA logo. We sincerely thank the

SCMA for their tremendous support of our activities. If there are any suggestions or questions about the MUSC chapter of the AMA-MSS and SCMA-MSS, please feel free to contact Justin Favaro at favarojp@musc.edu. We are looking forward to an even more exciting and eventful year!

The University of South Carolina School of Medicine (USCSM) had a super trip to the AMA-MSS Annual Meeting. The single element we were most proud of was the passage of Kelly Whitson's resolution on the subject of mandatory physical education stressing "lifelong" activities in grades K-12. Kelly did an excellent job of drafting and defending her resolution and the USC AMA-MSS applauds her hard work. We would also like to congratulate MUSC on the passage of their resolutions. The Annual Meeting also served as a valuable learning tool. We have recruited a large portion of the first year class through techniques presented in Chicago. It also contributed substantially to USC AMA-MSS's ability to interact with chapters at other schools—we now can put faces with names we see over e-mail all the time!

We would like to thank the SCMA for helping to make our trip possible and also for including us in their Saturday lunch meeting. We extend our congratulations to Drs. Randy Smoak and Chris Hawk on their successful elections to the AMA Board of Trustees and Council on Scientific Affairs.

Attending the meeting were James McCallum, USC AMA-MSS President; Steve Ridley, Vice-President-Membership; Caroline Keller, Treasurer; and Kelly Whitson. Our Vice-President of Community Service, Del Prewette, could not attend the meeting. He was at home awaiting the birth of his new baby girl, born June 23, Bay Ann Prewette.

USC SCHOOL OF MEDICINE PROFESSOR RECEIVES AWARD FROM AMA: Dr. Nancy Richeson, a professor and clinician in the department of internal medicine at the USCSM, received the 1998 Innovations to Curriculum Award from the AMA at the Annual Meeting in Chicago. This award recognizes changes in curricula that have improved the quality of education for medical school students. USC medical student Mary Scott Hayes nominated Dr. Richeson for the award. Dr. Richeson, who joined the USC School of Medicine faculty in 1983, has strengthened the medical school curriculum for second year students by developing comprehensive physical diagnosis classes. Traditionally, medical school students do not begin clinical training until their third year of medical school. One of Dr. Richeson's efforts is the innovative Standardized Patient Program in which community actors and actresses are trained to portray patients with medical problems. Students learn how to take medical histories and conduct thorough physical exams in a classroom setting before seeing patients. The award also recognizes Dr. Richeson's efforts to strengthen students' clinical training through physical diagnosis fairs and breast exam workshops and by working with local physicians at family practice centers, clinics, and hospitals.

Nancy Richeson, M.D.

CALL FOR PDRs: Any health care professional who gets a new PDR annually—we need you. When you get your 1999 PDRs in January, we would love to come pick up your 1998s and take them off your hands. We will be giving them to our second year students, who are AMA-MSS members. At USC, we need them in our second year course work. If you can give up your old PDR, call James at (803) 254-8477 so that we can plan to pick it up or arrange for shipping. Thanks in advance!

Classifieds

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Gray Matter

"Matters of Interest to South Carolina Physicians."

Thornton & Thorne give the medical community something to think about this month.

POTENTIAL CASH FOR INSUREDS WITH SERIOUS ILLNESSES

Physicians routinely work with patients who have health and cash flow problems. For some of these patients, a viatical settlement offers a way to realize cash to help deal with their problems. These programs can offer a real benefit to those who meet the criteria (i.e. own life insurance, are ill, and have the need for cash).

In a viatical settlement, the owner of a life insurance policy sells the policy to a third party, the viatical company. The sale occurs during the lifetime of the insured. The objective is to raise cash for the seller (the viator).

In most cases, the seller is also the insured but not always. In most cases, the insured has a serious illness but, again, not always. In all cases, the goal is to realize cash during the insured's lifetime from an asset that normally doesn't pay until the insured's death.

Viatical settlements began a decade or so ago, primarily among insureds with AIDS. They have evolved to where their use today is widespread among insureds that suffer any serious illness. Their growth was fueled by the Health Insurance Portability and Accountability Act of 1996 that made the proceeds free of federal income tax for insureds with terminal or chronic illnesses.

A terminally ill insured is one who has been certified by a physician to have an illness likely to result in death within 24 months. A chronically ill insured is one who is permanently or severely disabled. If the seller does not meet either of these definitions, federal income tax will be due on the gain from the viatical settlement.

The amount that will be paid by the viatical company depends upon a number of factors and varies on a case by case basis. The industry is slowly being regulated but its important to deal with well-capitalized companies that have been carefully checked and researched.

If the insured has the ability to maintain the policies until death by continuing to pay the premium, this is certainly the best option. However, if the insured has a need for cash and cannot pay the future premiums, a viatical settlement may offer real benefit. It's an option that should at least be explored to see if it offers advantages.

If you, or any of your patients, would like further information on viatical settlements, we'll be happy to provide it.

Views expressed herein are those of the authors and in no way represent SCMA. We do not give tax advice. Only your attorney and accountant are qualified to do so.

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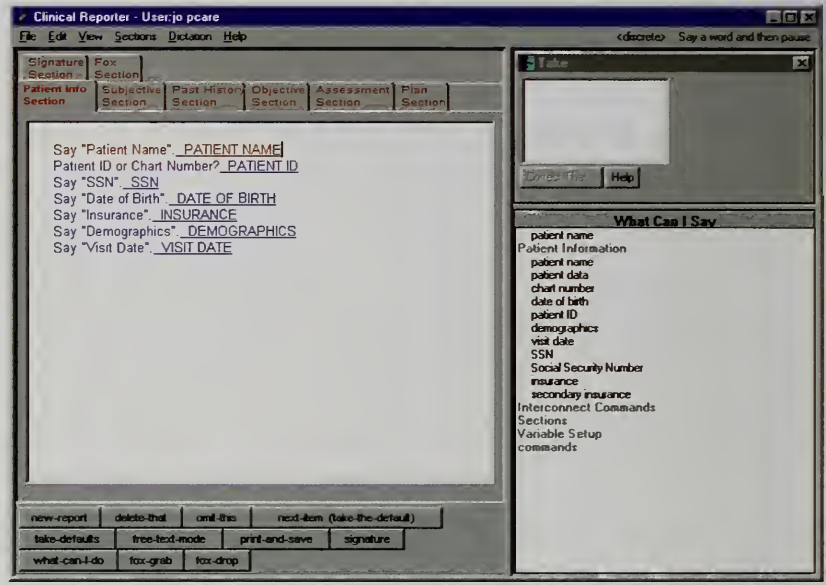

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Say "Visit Date". VISIT DATE

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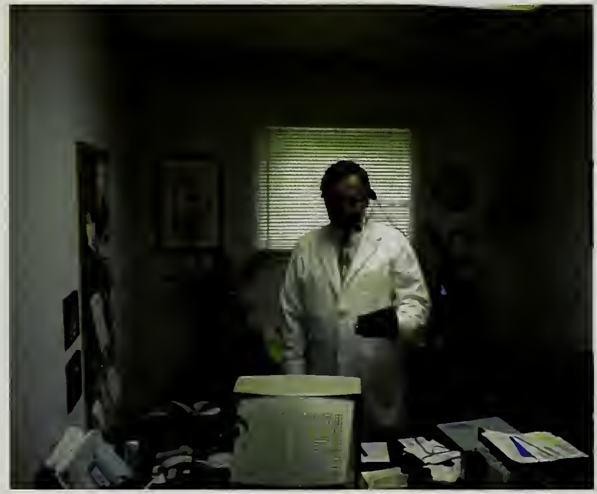

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The Journal

OF THE SOUTH CAROLINA MEDICAL ASSOCIATION

VOLUME 94
NUMBER 11
NOVEMBER 1998
459-516

SPECIAL ISSUE: DIABETES IN SOUTH CAROLINA

GUEST EDITOR: JOHN A. COLWELL, M. D., PH. D., C. D. E.
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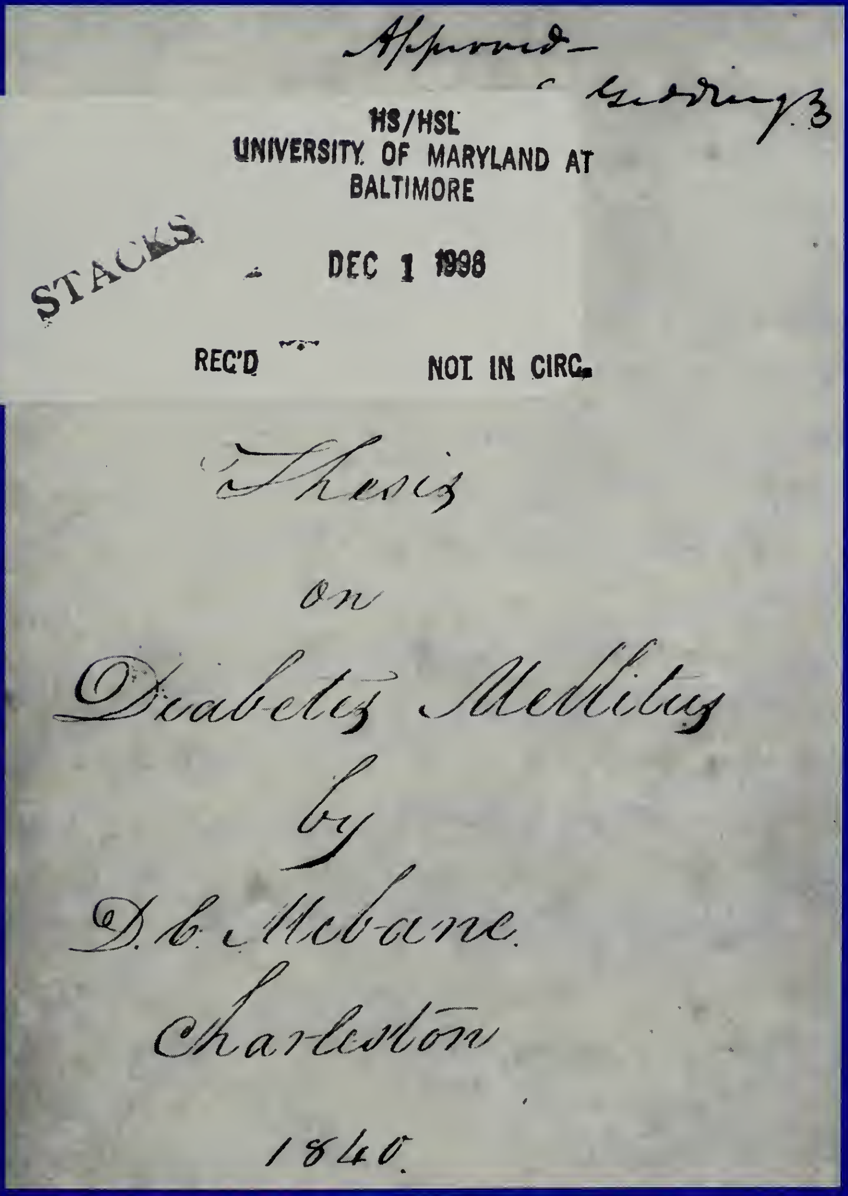

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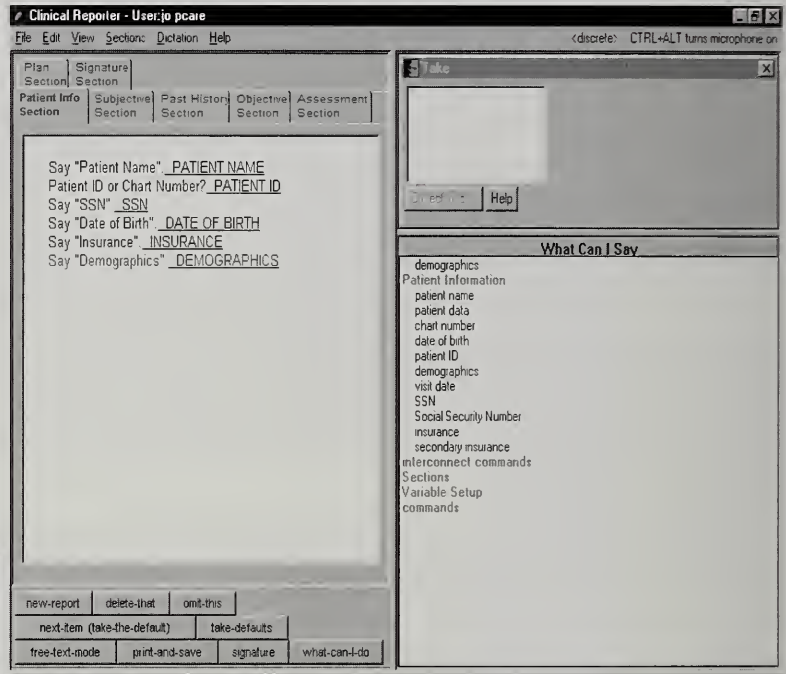

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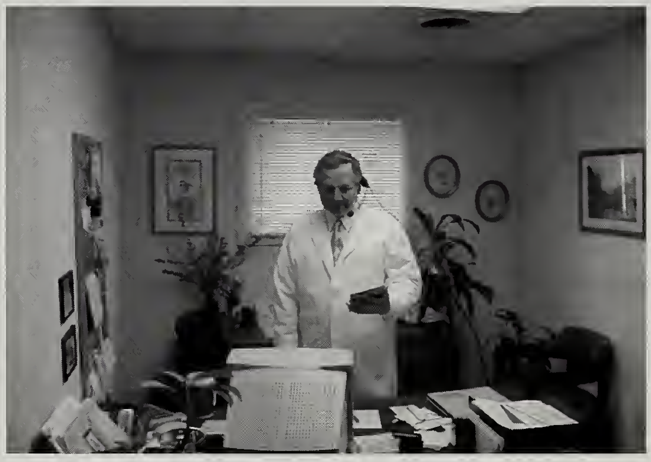

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incontinence

(in-**kont**-i-nens) n. 1. the state of being unable to control the bladder or bowels.

It's not a topic people like to discuss. But five percent of the population suffers from some degree of urinary or fecal incontinence. And, because this problem is hard to talk about, many suffer in silence. Which is a shame. Incontinence can be treated – often without surgery.

The Southeastern Continence Center at East Cooper Regional Medical Center is totally devoted to the treatment of incontinence. If you're suffering from this problem, we can help. To learn more about available treatment options, give us a call at (843) 8971-3338. Your inquiry will be completely confidential.

Incontinence can seem like a problem you just have to live with. But it doesn't have to be. Let us help you explore the alternatives that can put you back in control.

Medical Director: Dennis A. Fried, MD, FACS, FASCRS

Southeastern Continence Center
East Cooper Regional Medical Center

1230 Hospital Drive • Mt. Pleasant, SC 29464

call 843 971-3338

President's Page

IT'S TIME FOR THANKSGIVING

Give thanks to the Lord, for he is good.
—King David, 1000 BCE

I give thanks for all we have in our families, our communities, and our practices. I believe we live in one of the best places on earth and are blessed with one of the best professions available.

We should be thankful for our intelligence; we should be thankful for our education; we should be thankful for our training programs; we should be thankful for our spouses and our families (we must take time from our practices and our community activities to spend time with our children and spouses—in fact, this is a great time of year to just slip away on a special weekend trip); we should be thankful for our partners, we should be thankful for the patients that appreciate us and trust us with their medical care—to these people we owe our livelihood and we should serve them faithfully and not begrudgingly; we should be thankful for our practices; we should be thankful for our communities; and we should be thankful for our nation.

This list can go on and on, and you can add to it. Add to it and mean it! Make sure that the Thanksgiving holiday is meaningful this year for you and your family. Make sure you do something together.

All the best!

Stephen A. Imbeau, M. D.
President

The Journal™ OF THE SOUTH CAROLINA MEDICAL ASSOCIATION

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NOVEMBER 1998
NUMBER 11

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November 1998

MEDICARE UPDATE

Participation Enrollment and Fee Schedule Special Update

The Health Care Financing Administration (HCFA) will now allow Palmetto GBA, LLC to send an enrollment package and fee schedule similar to what you may have received in past years. They will be mailing the enrollment package and fee schedule in mid-November. You will not have to pay for this package. This is a change from the article printed on Page 9 of the October issue of the *Medicare Advisory* and other articles indicating that you will not receive a Participation Enrollment package including the fee schedule this fall.

HCFA 855 Enrollment Form Rules

Don't forget that the HCFA 855 forms mailed to Palmetto GBA, LLC after September 30, 1998 must be the new 1/98 version. Palmetto GBA, LLC cannot accept the old 5/97 version postmarked after September 30, 1998. This includes the 855R and 855C forms. The only exception is applications already in process (they can continue to accept returned applications). Below are some rules to follow when completing the 1/98 version of the HCFA 855 form.

✓ An authorized representative must sign the HCFA 855 form. PGBA will no longer accept any other signatures. An authorized representative is defined as someone who has financial authority and financial responsibility for the group/organization for which they sign. Examples of HCFA approved authorized representatives are the Chief Executive Officer (CEO), Chief Financial Officer (CFO), President, Owner, Treasurer, etc.

✓ If the authorized representative signature on any HCFA 855 form is someone other than the above, the form will be returned.

✓ HCFA is now very strict in interpreting the definition of Managing/Directing Employee, which reads "...individuals who exercise operational or managerial control over the provider/supplier, or who directly or indirectly conduct the applicant's day to day operations." This must be someone who has control of the company and has firing/hiring authority (of the physicians). A typical billing or office manager does not meet the definition.

✓ To verify tax ID for ownership purposes, the Internal Revenue Service (IRS) form CP575 is required. The IRS issues this form. You must contact your local IRS office if you do not have a copy of this from for your tax ID. A W-9 form is not acceptable.

✓ 1099 Contractors can complete the HCFA 855R to affiliate themselves to a group practice. They must complete the same forms as W-2 employed providers.

✓ Physician Assistants are now required to complete section 6d and section 9, giving information about their supervising physician.

✓ Social workers who are licensed by the state of South Carolina as a LISW or LMSW are the only social workers that are qualified to enroll in Medicare Part B.

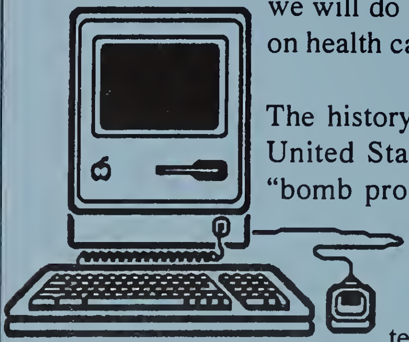
✓ A business license is required to enroll in Medicare. If you do not have a business license issued from the city, town or county in which you are located, you must provide Palmetto GBA, LLC with a Certificate of Existence. You must indicate on the application that a business license is not required for the city, town or county where you are physically located.

✓ Correction fluid (white out) is not allowed on the HCFA 855 forms.You must use blue or black ink to complete all forms.

THE INTERNET FOR HEALTH CARE PROFESSIONALS

(An ongoing series of articles about the Internet for today's physicians)

Unless you've been involved in volunteer work in some remote village in a deep, dark jungle, you've heard about it—the Internet. There has been no medium, which has grown so fast, to penetrate society so quickly and change our world as much as the Internet. But while we've all heard about the Internet, very few really understand this new technology, its implications, or how to manage it. For the next few months, we will do our best to enlighten you as to the history of the Internet, its direction, its impact on health care, and how you can "ride the information superhighway."



The history of the Internet is quite interesting. The Internet actually started out with the United States Department of Defense. The government needed a network, which was "bomb proof." In the late 1960s, a network was established which linked hundreds of smaller networks. Each network had its own network administrator and was not dependent on any other network. This meant that if one network went down, information would still arrive at its destination via a different route. This same technology is being used today for the Internet. Why is this important? Because this reliability of the network means data is always accessible—an important feature for any business or website in the health care industry.

However, the Internet did not begin to catch on until the World Wide Web was developed. In the late 1980s, the Web was developed by Tim Berner-Lee, a consultant working at CERN, a particle physics lab in Switzerland. The initial purpose for developing the Web was to allow scientists to share data in a graphical format. In mid-1993, the first commercial websites were developed and set up shop on the Internet. In 1993, there were 130 websites, two of which were commercial. Estimates place the number of commercial websites today at well over 1,000,000. The growth is undeniably phenomenal. In fact, during a debate on the amount of growth the Internet has seen, Xerox's Mark Resch summed it up by saying, "We're in a hurricane, and they are arguing about whether the wind is blowing 150 miles an hour or 130 miles an hour."

With so much information available on the Internet, how can a practice use the Internet productively without feeling as if it has been swept up into the winds of this "hurricane?" The first step is getting your office set up with Internet access. Next month, we will continue this series with *Establishing An Internet Connection*. In this article, we will discuss Internet Service Providers (ISPs), the best Internet software, and how to choose the best type of connection for your needs.

SCMA WORKSHOPS

A CONSUMER'S GUIDE TO INFORMATION TECHNOLOGY IN THE MEDICAL OFFICE

December 3, 1998

The rate of change and the number of new information technology products and services becoming available is enough to make even an expert dizzy. This workshop will give you unbiased information on the computer technology explosion hitting medical offices. A few of the topics that will be covered are networks, computer tips and pointers, operating systems, remote communications, and many more. Register by November 20, 1998.

9:00 a.m. - 4:00 p.m.; Registration: 8:30 a.m.
Columbia, Clarion Town House Hotel

Space in each program is limited, so be sure to register early. If you have any questions, please contact Melissa Hamby, extension 253, at 798-6207 in Columbia, (800) 327-1021 statewide, or by e-mail at melissa@scmanet.org. ❒

SUPPORT OUR FUTURE PHYSICIANS

The South Carolina Institute for Medical Education and Research (SCIMER) is resuming its program to send Season's Greetings cards for you in lieu of other gifts you may have been sending during the holiday season.

By now, you should have already received the flyer about the Season's Greetings program. Please pledge your support of our future physicians by making a tax-deductible contribution to SCIMER. For a minimal contribution of $10 per person (or group name), you can say "thank you" to those who have helped your practice during the past year. At the same time, you will be financially assisting a medical student. In honor of each contribution, SCIMER will send an attractive Season's Greetings card to each person or group in recognition of your gift. Simply send your list along with current addresses and your contribution to SCIMER no later than December 14, 1998. Remember that today's medical student is tomorrow's physician who will be dedicated to the health of South Carolinians in the coming years.

If you have any questions about the program, please contact Melissa Hamby, extension 253, at 798-6207 in Columbia, (800) 327-1021 statewide, or by e-mail at melissa@scmanet.org.

PHYSICIANS CARE NETWORK UPDATE

Physicians Care Network (PCN) now has 6,814 participating physicians, 704 participating ancillary providers and 85 participating hospitals. PCN currently has 100 contracted groups with 53,935 covered lives. We will provide more information as contracts are received.

NEW GROUPS

- CDS Ensembles; Greer; effective 8/1/98; Access/Peer Review.
- World Insurance; Statewide; effective 11/1/98; Access/Peer Review

Effective immediately, MRIs no longer require prior plan approval. Please make this change in your provider manual.

If you have questions about PCN, please contact Cindy Osborn, Network Coordinator, PCN, at (803) 798-6207, extension 257, or statewide at (800) 327-1021. You may also send an e-mail message to cindy@scmanet.org. ❐

CAPSULES

Vince Degenhart, MD, an anesthesiologist from Columbia, has been selected as a participant in the inaugural American Medical Association/Glaxo Wellcome New Leadership Development Program, *Visionary Leadership Strategies*. The program is designed to identify practicing physicians at a relatively early stage of involvement in organized medicine. The selection committee had a very difficult task of selecting 45 up-and-coming leaders from a pool of over 200 applicants. ❐

PROTECTING YOUR PRACTICE

In conjunction with the South Carolina Society of Addiction Medicine, the University of South Carolina School of Medicine, Palmetto Richland Memorial Hospital, and the South Carolina Medical Association present the Sixth Annual Alcohol and Drug Issues Conference for Clinicians.

The conference is scheduled for December 12-13, 1998, at the Clarion Townhouse in Columbia. The registration fee is $95. For more information and a registration form, please contact Steve Hasterok at the Office of CME, 3555 Harden Street Extension, Suite 100, Columbia, SC 29203. You may also contact him at (803) 434-4211, by fax at (803) 434-4288, or by e-mail at steve@richmed.medpark.sc.edu. ❐

PHYSICIAN RECOGNITION AWARDS

The following SCMA physicians are recent recipients of the AMA's Physician Recognition Award. This award is official documentation of Continuing Medical Education hours earned.

William Albert, M.D.
Michael V. Antworth, M.D.
Mary L. Applebaum, M.D.
Frank A. Axson, M.D.
John F. Bangston, M.D.
Charles H. Banov, M.D.
Herbert F. Barnhill, M.D.
Naseeb B. Baroody, M.D.
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Nabil K. Bissada, M.D.
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Cecil Y. Brown, M.D.
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Irina Borissova, M.D.
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Gwendolyn M. Cambron, M.D.
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Edward R. Cathcart, M.D.
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Mari S. Chance, M.D.
William F. Childers, M.D.
Orr M. Cobb, M.D.
Samuel J. Corbin, M.D.
Lisa L. Corum, M.D.
Scott S. Counts, M.D
Linda C. Craska, M.D.
Robert V. Cummings, M.D.
Paul A. Deci, M.D.
Vincent J. Degenhart, M.D.
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James T. Douglas, M.D.
Lance A. Duvall, M.D.
Simeon G. Eaves, M.D.
Joseph M. Evans, M.D.
Jason S. Feinberg, M.D.
Mitchell D. Feller, M.D.
Rodney Fitzgibbon, II, M.D.
Andrew E. Floren, M.D.
Harold I. Friedman, M.D.
Anderson B. Funke, M.D.
Stephen R. Gardner, M.D.
Randall O. Garriott, M.D.
Nguyen N. Giep, M.D.
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James D. Givens, M.D.
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Robin O. Go, M.D.
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Robert C. Goodbar, M.D.
Alexia L. Gordon, M.D.
Phillip A. Greene, M.D.
Sidney T. Griffin, M.D.
Roger K. Griggs, M.D.
Raymond V. Grubbs, M.D.
Melvyn L. Haas, M.D.
Samuel T. Haddock, M.D.
John A. Harrill, M.D.
Robert E. Hartvigsen, M.D.
Curtis D. Haskins, M.D
Henry B. Hearn, M.D.
Hoke F. Henderson, M.D.
Charles W. Hinnant, M.D.
David W. Hiott, M.D.
Paul J. Hletko, M.D.
Marcelo L. Hochman, M.D.
David A. Howell, M.D.
Roy A. Howell, M.D.
Kyllan J. Hutchinson, M.D.
Danie W. Hyler, M.D.
Focell I. Jackson, M.D.
Joseph P. Jackson, M.D.
James L. Jewell, M.D.
John S. Jobe, M.D.
Alan M. Jolles, M.D.
Shazia Khan, M.D.
Fred M. Kimbrell, M.D.
Reamer B. King, M.D.
Richard F. Knox, M.D.
Jeffrey E. Lanford, M.D.
Martin J. Leidinger, M.D.
Eugene M. Lepine, M.D.
Sara M. Lindsay, M.D.
Susan J. Littler, M.D.
William D. Lorenz, M.D.
Oscar F. Lovelace, M.D.
Rajeev Malik, M.D.
Erin M. Malloy, M.D.
Jay M. Markowitz, M.D.
Thomas R. Mather, M.D.
Malcolm R. Mathews, M.D.
Paul Mazzeo, M.D.
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W. Lance Miller, M.D.
Stanley R. Mogelnicki, M.D.
Joseph K. Newsom, M.D.
James H. Oakman, M.D.
Teresa J. Olson, M.D.
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Frank F. Phillips, M.D.
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Frederick C. Swensen, M.D.
Dale R. Tabor, M.D.
William L. Thomas, M.D.
Douglas Tiedt, M.D.
Ahraya Tocharoen, M.D.
Robert W. Todd, M.D.
Richard E. Townsend, M.D.
Mark A. Van Swol, M.D.
Wayne C. Vial, M.D.
Kim V. Vo, M.D.
Betsy J. Walker, M.D.
William B. Walkup, M.D.
Woodrow B. Williams, M.D.

MARK YOUR CALENDAR

The SCMA's Annual Meeting and Scientific Assembly is scheduled for April 29-May 2, 1999, at Charleston Place Hotel, Charleston, South Carolina.

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SPECIAL ISSUE: DIABETES IN SOUTH CAROLINA

INTRODUCTION

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CAROLYN JENKINS, R. N., R. D., DR. P. H., C. D. E.
DEYI ZHENG, M. D., PH. D.

On behalf of the Diabetes Initiative of South Carolina and its authors, we appreciate the opportunity to focus on diabetes in this symposium issue. It is our hope the symposium will facilitate continued efforts to reduce the burden of diabetes, as we work collaboratively to improve care for the estimated 310,000 persons with diabetes in South Carolina. There are many critical issues. We have chosen six major areas to review.

This symposium starts with an overview of the Diabetes Initiative of South Carolina and the progress of the Initiative since its beginning in 1994. The epidemiology of diabetes in South Carolina describes the incredible burden of this disease. Prevalence, behavioral risk factors, morbidity and mortality patterns, as well as the immunopathogenesis of type 1 diabetes are considered. The papers on physician office-based diabetes care and diabetes patient education describe the patterns of diabetes care practices in South Carolina and illustrate methods for improving diabetes care and education for health professionals' practices and their patients with diabetes. Community programs and screening describes current national and state community programs for facilitating behavior change, improving metabolic control and health outcomes for people with diabetes, as well as recommended approaches for identifying diabetes risk factors and complications. Diabetes research in South Carolina reviews the long history of diabetes clinical research accomplishments and current and future perspectives in our state.

November is Diabetes Month. We sincerely hope that more and more health professionals and persons with diabetes join together as we all work to reduce the burden of diabetes in South Carolina.

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OVERVIEW OF THE DIABETES INITIATIVE OF SOUTH CAROLINA*

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DEYI ZHENG, M. D., PH. D.
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GEORGE ROSEBROCK, M. D., C. D. E.
STEVEN H. SMITH

OVERVIEW OF DIABETES INITIATIVE OF SOUTH CAROLINA

South Carolina has a long history of high quality diabetes clinic research.[1] However, diabetes prevalence and mortality in South Carolina rank among the highest in the United States.[2-4] It has been evident that lack of resources for diabetes education, lack of community involvement, and lack of a state organization for planned diabetes prevention activities make diabetes a major public health problem in South Carolina.

LEGISLATION

The Diabetes Initiative of South Carolina was established by the South Carolina General Assembly in June 1994. Title 44 of the 1976 code was amended by adding chapter 39 to create the Diabetes Initiative of South Carolina Board. The Board's purpose and duties were to establish a Diabetes Center of Excellence at the Medical University of South Carolina (MUSC) and to establish the Diabetes Outreach Council.

MISSION

A mission statement was adopted in May 1996. The Diabetes Initiative of South Carolina will maintain a leadership position in providing education about diabetes and its complications to the general public, individuals with diabetes, and health professionals. The Initiative will develop and sustain education programs in medicine, nursing, pharmacy, and other health professions and will promote the highest standards of medical care in diabetes and its complications. It will develop methods to assure the certification (recognition) of optimal numbers of individuals and programs as providers of superior knowledge about diabetes and its complications. The Initiative will organize and supervise programs which provide ongoing epidemiologic information and surveillance of medical costs, scope and impact of diabetes, and its complications in South Carolina. The Initiative will develop community-based diabetes programs to promote lifestyle changes that have the potential to prevent or delay the onset of diabetes and its complications. The Initiative will work closely with other organized groups that are active in programs directed at diabetes and its complications. Finally, the Diabetes Initiative of South Carolina will conduct research on

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selected clinical issues in diabetes, as defined and approved by peer reviewed research protocols.

ORGANIZATION

Board: The Diabetes Initiative of South Carolina has broad-based input from health professionals, health care organizations, and leaders in diabetes care and is governed by a Board of Directors (See Appendix for Board Directors and Council's Members). The organizational structure is shown in Figure 1. The Board was established, according to the legislative guidelines, by Fall 1994. It consists of the following officials or their designees: President of the Medical University of South Carolina, Dean of the University of South Carolina School of Medicine, Commissioner of the Department of Health and Environmental Control, Director of the State Department of Health and Human Services, President of the South Carolina Medical Association, Chairman of the Board of the South Carolina Affiliate of the American Diabetes Association, President of the South Carolina Affiliate of the American Diabetes Association, President of the American Association of Diabetes Educators, President of the South Carolina Academy of Family Physicians, Director of Office of Minority Health in the Department of Health and Environmental Control, Governor of the South Carolina Chapter of the American College of Physicians, and a representative of the Governor's Office to be appointed by the Governor.

Chairman of the Board: John A. Colwell, M.D., Ph.D., professor of medicine and director, Diabetes Center, Medical University of South Carolina, was selected Chairman of the Board, and David Keisler, M.D., professor and chairman of family medicine, University of South Carolina School of Medicine, was elected Vice-Chairman.

Councils: There are three Councils which report regularly to the Board and carry out many of the activities of the Diabetes Initiative of South Carolina. These activities are reported in more detail in other articles in this symposium.

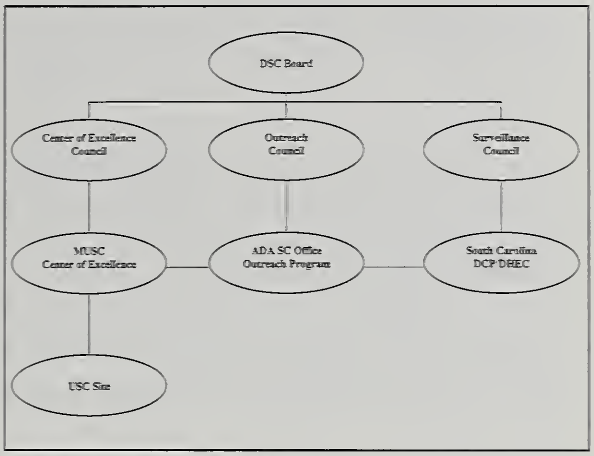
DSC Board
Center of Excellence Council
Outreach Council
Surveillance Council
MUSC Center of Excellence
ADA SC Office Outreach Program
South Carolina DCP/DHEC
USC Site

Figure 1. Organization Chart

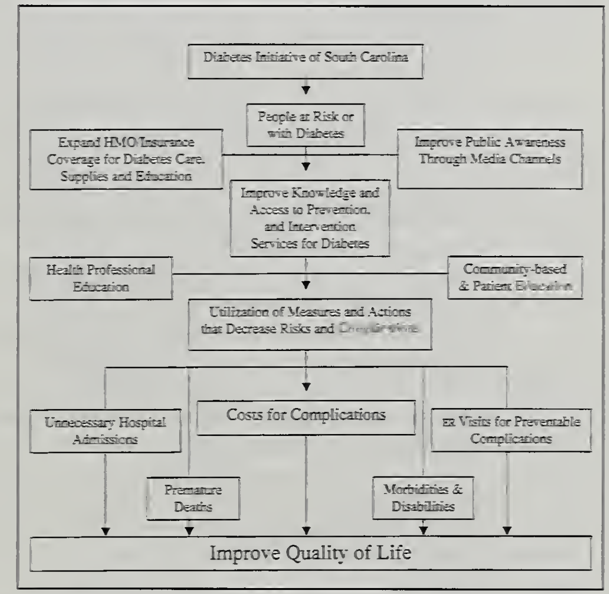
Diabetes Initiative of South Carolina
People at Risk or with Diabetes
Expand HMO/Insurance Coverage for Diabetes Care, Supplies and Education
Improve Public Awareness Through Media Channels
Improve Knowledge and Access to Prevention, and Intervention Services for Diabetes
Health Professional Education
Community-based & Patient Education
Utilization of Measures and Actions that Decrease Risks and Complications
Unnecessary Hospital Admissions
Costs for Complications
ER Visits for Preventable Complications
Premature Deaths
Morbidities & Disabilities
Improve Quality of Life

Figure 2. Improve Quality of Life through Diabetes Initiative of South Carolina.

The Outreach Council chaired by Carolyn Jenkins, R.D., M.S.N., C.D.E., Dr.P.H., is directed to oversee and direct efforts in patient and public education and primary care. Efforts include: (1) promoting adherence to national standards of education and care; (2) assessment of patient care costs and reimbursement issue for persons with diabetes in South Carolina; and (3) other outreach functions as directed by the Board.

The Surveillance Council was organized in 1995 to develop and implement a state-of-the-art system for the assessment of diabetes in

South Carolina and to provide a mechanism to evaluate intervention and control programs. It is chaired by Daniel Lackland, Dr.P.H., associate professor at the Department of Biometry and Epidemiology, MUSC. The Council consists of a geographic diverse group representing the leaders in diabetes research, clinical practice, and public health and is staffed by data specialists from the South Carolina Department of Health and Environmental Control (DHEC). The Council operates with formal meetings and communications.

The Diabetes Center of Excellence Council oversees the activities of the MUSC Diabetes Center. The Center is charged with developing and implementing programs of professional education, specialized care, and clinical research in diabetes and its complications in accordance with priorities established by the Diabetes Initiative of South Carolina Board. The Council is co-chaired by Dr. Colwell and

I. Improve knowledge of diabetes, quality of life, and access to prevention and intervention services
- Healthier lifestyles: nutrition, exercise, weight control
- Risk factor awareness: prevention, signs/symptoms of diabetes and complications
- Improve access to preventive services, screening and ongoing care: formalized systematic care and education
- Improve self-management: use of key monitoring guidelines by persons with diabetes
- Expand financing: insurance and managed care coverage for education and care

II. Increase utilization of short-term [surrogate measures and actions (yearly)]
- Feet: foot care instruction
- Eyes: eye specialist, laser
- Urine microalbumin: ACE inhibitor Rx
- Lipid panel: diet/drug Rx
- HbA1c: intensive glycemic management
- Education: self-management
- Other: ASA, smoking cessation program, exercise program

III. Increase services and education in health professional shortage areas
- 23 of 46 counties are classified as health professional shortage areas
- Health professional shortages:
  - Family Medicine: 1/4,819 people
  - Internal Medicine: 1/9,137 people
  - Endocrinologist: 1/327,000 people
  - Certified Diabetes Educators: 85
  - Podiatry: 102
  - Pharmacists
  - Advanced Practice Nurses
  - Physician Assistants
  - Eye Care Specialists

IV. Reduce morbidity and disability
- End Stage Renal Disease: 28.1/100,000
- Amputations: 348/year
  - Length of stay 16.3 days
- Hospitalization rates:
  - Myocardial Infarction: 7.4/10,000 discharges
  - Chronic Renal Failure: 7.7/10,000 discharges
  - Amputations: 3.7/10,000 population
- Pregnancies:
  - Perinatal mortality: 22.6/1000
  - Infant mortality: 12.1/1000
  - Abnormal conditions: 15.5%
- DKA deaths: 34
- Blindness: Registry

V. Reduce (age-adjusted) mortality rates
- Diabetes mellitus as a primary or secondary cause of death: 73.5/100,00
- Highest counties
- Improve reporting on death certificates

VI. Target high risk groups
- African Americans: prevalence doubled complications increased 50-300%
- Native Americans: prevalence up to 50% in some age groups

VII. Decrease preventable hospital admissions and charges
- Admissions: 51,100
- Total charges: $712 million

VIII. Decrease preventable emergency room visits
- Emergency room visits for diabetes: 10,628/year
- Uncomplicated diabetes mellitus is the diagnosis for 79% of those visits

IX. Improve statistical basis for estimating prevalence of diabetes and diabetes complications
- Screen high risk populations
- Establish a Diabetes Registry

Figure 3. DSC Long Range Plan—Goals and Aims: 1994 Database

Pamela Arnold, R.N., M.S.N., C.D.E., and consists of members appointed by the president of the Medical University of South Carolina. The Council's purpose is to: (1) review programs in professional education, specialized care, and clinical research developed by the Center; and (2) assist in the development of proposals for grant funding for the center's activities.

Since 1995, the Board has met quarterly to review activities and to work toward improving diabetes outcome in South Carolina. It reviews the reports from three Councils: Outreach, Surveillance, and Diabetes Center. Activities by the South Carolina Diabetes Control Program (SCDCP)/DHEC and American Diabetes Association (ADA), South Carolina Office are coordinated with activities with the Councils.

STRATEGIC PLAN

In 1997, a report, *The Burden of Diabetes in South Carolina,* was released.[3] It reflected the scope, impact, and costs of diabetes and its complications. The report was the result of close cooperation between the Diabetes Initiative of South Carolina Board, the Surveillance Council, and the SCDCP/DHEC. The major findings of this report served as the epidemiologic basis for the development of the *Ten Year Strategic Plan* for the Diabetes Initiative of South Carolina.[5]

The *Ten Year Strategic Plan* addresses major barriers to care and outlines procedures to improve care and recommends outcomes measures to assess program success (Figure 2). There are nine specific goals and aims which are outlined in Figure 3. Major efforts are assigned to the Board, the Councils, the SCDCP/DHEC and ADA South Carolina Office.

SUMMARY

Implementation is underway for many of these programs, and there are descriptions of activities elsewhere in this symposium. The Board recognizes that in dealing with the complications of a chronic disease like diabetes, many years of intense effort will be needed before significant results may be appreciated. Progress will be monitored regularly by the Surveillance Council and SCDCP/DHEC, and modifications of the plan will be made by the Board at intervals after review of the data.

We are optimistic that over the next decade, this system will make a significant impact to reduce mortality, morbidity, and costs of diabetes, and the result will be an increased quality of life for people affected by diabetes in South Carolina. ❐

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APPENDIX: Board of Directors and Councils Members

Members	Affiliations	Board of Directors	Center of Excellence Council	Surveillance Council	Outreach Council
John A. Colwell, MD, PhD, CDE	Diabetes Center, MUSC	Chair	Co-Chair	✓	✓
David Keisler, MD	SC Academy of Family Physicians	Vice-Chair			
Neal Angel	Alchemy Press				✓
Pamela Arnold, RN, MSN, CDE, CCM	Diabetes Center, MUSC	✓	Co-Chair	✓	✓
Linda Austin, MD	Center for Public Education, MUSC				✓
Ellen Babb, MPH, RD	SCDCP/DHEC		✓		✓
Doniece Bagley, RN	Catawba Indians	✓			
Walter P. Bailey, MPH	SC Office of Research and Statistics			✓	
Yaw Boateng, RD, MS, MPH	SCDCP/DHEC	Ex-Officio		✓	✓
Edwin Bransome, MD	Academic Center, Medical College of Georgia	Advisory		✓	
Sandra Carnesale, MD, MPH	SC DHEC			✓	
Deborah Carson, PharmD, BCPS	Community Pharmacy, MUSC		✓		✓
Jerri Charlesworth	Beauford Memorial Hospital				✓
Marti Chitwood, RD, CDE	Private Practice, Charleston				✓
James Coleman, EdD	SC DHEC				✓
Walker Coleman, III	MUSC	Ex-Officio			
Beth Corley, MA	SC Office of Research and Statistics			✓	
Jeff Crane, MD	Private Practice, Florence				✓
Donald Eagerton, MD	Private Practice, Myrtle Beach				✓
James B. Edwards, DMD	President, MUSC	Ex-Officio			
Lisa Ellis, MPH	SCDCP/DHEC				✓
Howard Evert, MD	Primary Care Medicine, MUSC		✓		
James Ferguson, DrPH	SC DHEC			✓	
Esther Forti, PhD	College of Health Professions, MUSC				✓
David Garr, MD	Family Medicine, MUSC		✓		
W. Timothy Garvey, MD	Endocrinology, MUSC		✓	✓	
Barry Hainer, MD	Family Medicine, MUSC		✓		
Nell Hair, RN, CDE	St. Frances Xavier Home Health				✓
Catherine Haselden, MSW	Office of the Governor	✓			
Kathie Hermayer, MD	Endocrinology, MUSC		✓		
David Hislop, MPH	Low Country AHEC				✓
Ira Horton, MD	SC HHS Finance Commission	✓			
Nelson Gunter, MD	Carolina Medical Review	Advisory		✓	
Carolyn Jenkins, RD, RN, CDE, DrPH	College of Nursing, MUSC	✓	✓	✓	Chair
Lowrey King, MD	Ophthalmology, MUSC	✓	✓		
Tom Koenig	Pfizer Pharmaceuticals				✓
Daniel Lackland, DrPH	Biometry & Epidemiology, MUSC	✓		Chair	✓
Usah Lilavivat, MD	Carolina Diabetes & Kidney Center, Sumter, SC	✓			
Robert Lindemann, MD	SC Medical Association	✓			
John Little, MD	Companion, HMO	Advisory			
Kerry Mandeville	Vocational Rehabilitation				✓
Ronald Mayfield, MD	Endocrinology, MUSC		✓		
Ernest McCutcheon, MD, MPH	Family & Preventive Medicine, USC SOM			✓	
Roger Newman, MD	OB/GYN, MUSC		✓		
Ed Owens	Executive Director, Southern Region ADA	Ex-Officio			
Vytautas A. Pakalnis, MD, FACS	Ophthalmology, USC School of Medicine	✓		✓	
Jane Parker, MSN, CDE, PNP	College of Nursing, MUSC				✓
William Price, MD	Internal Medicine/Diabetes	✓			
Beth Ann Revell	ADA SC Office	✓			✓
William Robinson, MA	SC HBCU	✓			✓
George Rosebrock, MD, CDE	ADA SC Office/Roper Hospital Diabetes Center	✓	✓		
Gardenia Ruff, MSW, LISW	SC DHEC	✓			
Michael Samuels, DrPH	USC School of Public Health	✓			
Sabra Slaughter, PhD	SC AHEC	Advisory	✓		
Cheryl Stepka-Tracey	Diabetes Center, MUSC				✓
Stephen H. Smith	ADA	Ex-Officio			
James Sterrett, PharmD	College of Pharmacy, MUSC				✓
Sale Strickland	Eli Lilly Company				✓
Valerie Summersett, RN, MSN, CDE	AADE	✓			
James Thomas, MD	Internal Medicine, UDC		✓		
Elizabeth Todd, MSW, CDE	Diabetes Center USC Site				✓
Kenneth Trogdon	Communi-Care	✓			
Lisa Waddell, MD, MPH	SC DHEC	✓			
Fran C. Wheeler, PhD	USC School of Public Health	✓			
Steve Willi, MD, CDE	Pediatric Endocrinology, MUSC		✓		
Blake Williams	Carolina Medical Review			✓	
Denise Wood, RN, MSN, CDE	EDIC/IDEAL, MUSC		✓		
Deyi Zheng, MD, PhD	Biometry & Epidemiology, MUSC		✓	✓	

EPIDEMIOLOGY OF DIABETES IN SOUTH CAROLINA

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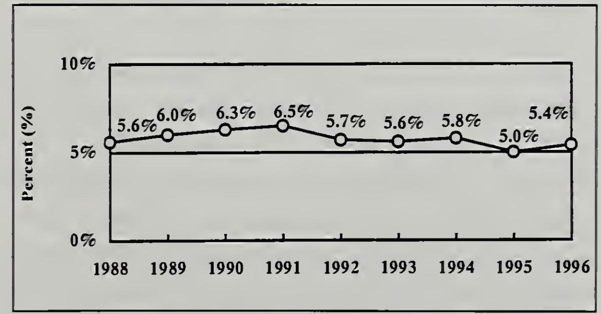
EPIDEMIOLOGY OF DIABETES IN SOUTH CAROLINA

Diabetes mellitus is one of the most profound chronic diseases affecting almost all populations.[1,2] The prevalence of diabetes in South Carolina remains one of the highest in the U.S., ranking second highest of the 50 states with nearly six percent of the population with diagnosed diabetes in 1994.[3] Adding to the burden of diabetes are the complications such as blindness, heart disease, amputation, and kidney failure. However, greater use of preventive services is clinically advantageous to maintenance of health and reduces diabetes complications.[4,5] The quality of life for people with diabetes and their families and the economic costs pose new challenges to combat this devastating disease at the population level. While the complications of diabetes have been well documented, the impact of the condition on the population of South Carolina is unclear. A surveillance system plays an important role in setting priorities, evaluating prevention effectiveness, and disseminating information.[3,6]

PREVALENCE

Prevalence of self-reported diagnosed diabetes ranged between 5.0 percent and 6.5 percent during the period from 1988 to 1996 (Figure 1). Prevalence increases with age (Table 1). For people age 45 and older, about one in 10 reportedly were diagnosed with diabetes in 1996. Similar to previous studies, nonwhites had a higher prevalence than whites (Table 2).[3,7-9] Of particular concern is the percent of undiagnosed diabetes, estimat-

Figure 1. Prevalence of Self-reported Diagnosed Diabetes, SC, 1988-1996*



*Prevalence is for people age ≥ 18.

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*Address correspondence to Dr. Lackland at the Department of Biometry and Epidemiology, MUSC, 550 MUSC Complex, Suite 1125, Charleston, SC 29425.

Table 1. Number and Rate of Diabetes-related Condition by Age, SC, 1996*

	Age									
Measurement	0-19		20-44		45-64		65+		Total	
	No.	Rate	No.	Rate	No.	Rate	No.	Rate	No.	Rate
Prevalence[†]	_	_	22004[†]	1.5[†]	63611	8.7	59919	13.1	147804	5.4
ER visit	480	44.0	5374	359.6	9011	1307.8	7785	1837.6	22650	612.3
Hospitalization	674	61.7	6514	435.9	20996	3047.6	30979	7312.3	59163	1599.6
Death	3	0.3	92	6.2	667	96.8	2231	526.6	2993	80.9

* Rates are used per 100,000 population. Prevalence is used per 100 population.

† Self-reported diagnosed diabetes among people age ∃ 18 & number is weighted to reflect SC population.

Table 2. Number and Rate of Diabetes-related Condition by Race and Gender, SC, 1996*

	Race and Gender							
Measurement	White Men		White Women		Nonwhite Men		Nonwhite Women	
	No.	Rate	No.	Rate	No.	Rate	No.	Rate
Prevalence[†]	39060	4.2	48156	4.8	27474	7.5	33114	7.5
ER visit	3969	314.5	5786	444.0	4186	790.9	8709	1441.3
Hospitalization	15913	1260.8	19530	1498.6	8010	1513.5	15710	2600.6
Death	875	69.3	977	75.0	414	78.2	727	120.3

* Rates are used per 100,000 population. Prevalence is used per 100 population.

† Self-reported diagnosed diabetes among people age ∃18 & number is weighted to reflect SC population.

ed as nearly 50 percent of all diabetes in South Carolina.[7] Undiagnosed diabetes is equal among the blacks compared to the whites. Furthermore, blacks with diabetes had a higher glycosylated hemoglobin level than whites with diabetes.[7]

MORBIDITY

Emergency Room: There were 22,650 emergency room (ER) visits by South Carolinians with diabetes in 1996 (Tables 1 and 2). Among these 22,650 ER visits made by diabetic patients, nearly three-fourths were over 45 years of age. Over half (54 percent) were made by blacks.

Hospitalization: There were 59,163 hospitalizations for people with diabetes in 1996 (Table 1). These accounted for 14 percent of total hospitalizations. The proportion of hospitalizations for people with diabetes has increased almost 50 percent since 1991 (Figure 2). People aged 65+ accounted for over half (53 percent) of total diabetic patients hospitalized. Hospitalization varied respectively by race and gender groups, with white men accounting for 27 percent, white women 33 percent, nonwhite men 14 percent, and nonwhite women 27 percent. However, hospitalization rates (per 100,000 population) were highest in nonwhite women, followed by nonwhite men, white women, and white men (Table 2). In addition, significant geographic variations in the age standardized hospitalization rates were also detected with higher rates in the coastal region (Figure 3). Rates in counties bordering urban areas in Georgia and North Carolina are underestimated; hospitalizations of residents of South Carolina border counties in hospitals outside South Carolina are not included in the South Carolina database. The increase in proportion or hospitalization rates may be caused partially by increased diabetes awareness. Nonetheless, the burden, which was not recognized before, may be still underestimated.

Figure 2. Proportion of People with Diabetes in Hospital, SC, 1987-1996

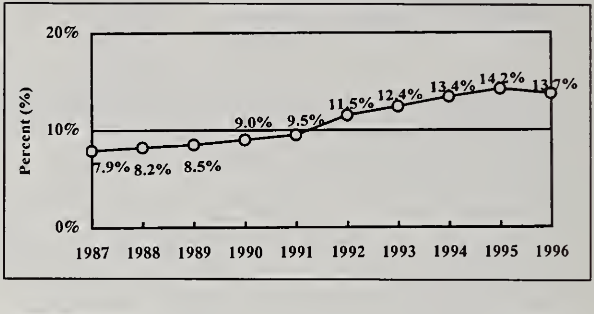
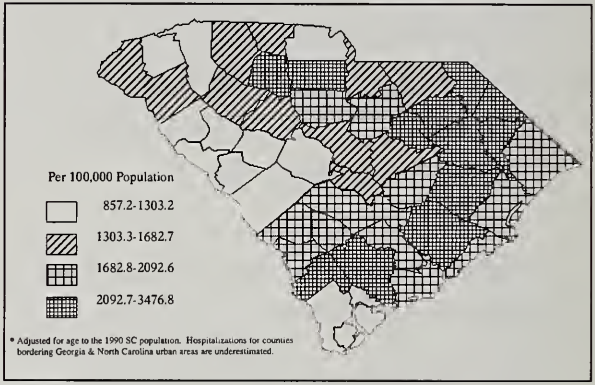


Figure 3. Age Standard Hospitalizations for People with Diabetes by County, SC, 1996*



* Adjusted for age to the 1990 SC population. Hospitalizations for counties bordering Georgia & North Carolina urban areas are underestimated.

End Stage Renal Disease (ESRD): In 1996, there were 1,436 ESRD dialysis patients with a primary diagnosis of diabetes. Diabetes accounted for 35 percent of the total ESRD dialysis population in South Carolina. Among the total ESRD dialysis patients in

South Carolina, 68 percent were black, 27 percent white.

DIABETES AND PREGNANCY

Diabetes is associated with one of 10 pregnancies in South Carolina (eight percent for whites and 11 percent for blacks), with about one-third of these considered gestational diabetes.[10] However, perinatal mortality was significantly higher among diabetic mothers (eight percent) compared to among non-diabetic mothers (two percent).[10] Early detection, monitoring, and control have been shown to be effective in reducing these adverse diabetes-related pregnancy outcomes.[11]

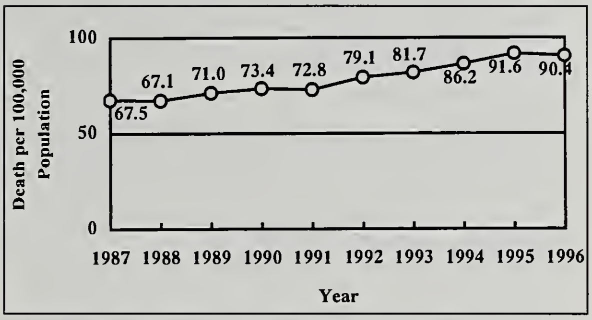
MORTALITY

Diabetes has been the sixth leading cause of death for South Carolinians for several years. In 1996, there were 2,993 deaths attributed to diabetes. The mortality rate in nonwhite women was the highest, followed by nonwhite men, white women, and white men (Table 2). Of particular concern is the increasing trend of diabetes mortality in South Carolina (Figure 4).

RISK FACTORS

Although age, race, and social economic status are major factors associated with type 1 and type 2 diabetes, these population attributes do not account for the excess risk of diabetes in South Carolina. Modifiable risk factors, often associated with increased insulin resistance, are significant in the development of diabetes. Obesity and physical inactivity are strong risk factors for type 2 diabetes. Obesity is a major public health problem in South Carolina, affecting over one-fourth of the adult population with significant variation by race and gender: white men–21 percent, white women–21 percent, black men–29 percent, and black women–43 percent.[12] Central obesity and body mass are greater among the black population in South Carolina.[13] Impaired glucose tolerance (IGT) and gestational diabetes mellitus are also associated with the development of diabetes.[1]

Figure 4. Age Standardized Diabetics-related Mortality Rate, SC, 1987-1996*



*Adjusted for age to the 1990 U.S. population.

Genetic disposition may play a role in the development of type 2 diabetes, with candidate genes such as the glucokinase gene, glucose transporter system genes, the glycogen synthase gene, insulin signal transduction pathway genes, and the phosphoenol pyruvate carboxykinase gene.[1]

Type 1 diabetes is certainly a different entity from type 2, although they are both heterogeneous disorders with the common characteristic of hyperglycemia. The highest incidence rate for type 1 diabetes is at ages 10-14. Gender does not seem to be a significant determinant. Whites have a higher incidence rate than blacks.[1] Infectious agents during childhood, socioeconomic factors, and nutrition may be involved. Those factors are not related to gender but they may be related to race. There is clear evidence that racial and ethnic backgrounds are important risk factors for type 1 diabetes.

Associations between human leukocyte antigens (HLA) and type 1 diabetes have been documented. The HLA region in chromosome 6 contains genes that encode class I (A, B, C), class I (DR, DQ, DP), class II, and numerous other genes related to immune response. Immunogenetic studies showed that the risk of developing type 1 diabetes markedly increased for individuals who are homozygous of both DQA1*Arg-52 (DNA sequences that code for arginine in position 52) and DQB1*non-Asp-57 (DNA sequences that code for an amino acid other than aspartic acid in position 57) alleles.[1]

Glutamic acid decarboxylase (GAD) antibodies are the most promising immune markers for type 1 diabetes. About 84 percent of newly diagnosed type 1 diabetes patients had GAD antibodies.[1]

The islet cytoplasmic antibodies (ICA) are considered potent risk factors for type 1 diabetes. In the U.S., less than one percent of general population have positive ICA. However, about 65 percent to 100 percent of newly diagnosed type 1 diabetes patients had ICA. On the other hand, most individuals with ICA never develop type 1 diabetes. The predictive value for people with ICA to develop type 1 diabetes is about 20 percent. Other etiologies need further exploring.[1]

Insulin autoantibodies (IAA) have also been studied in identifying individuals at high risk for type 1 diabetes. About 50 percent of those with IAA positive will develop type 1 diabetes.[1]

Because of age of onset, confirmed seasonal variation, susceptibility of race and ethnicity, and immunogenetic markers, type 1 diabetes may be triggered by an autoimmune mechanism in genetically susceptible individuals earlier in their life, subsequently resulting in type 1 diabetes. The autoimmune and genetic susceptibility have an effect in developing complications.[1]

The role of genetics and immunology in developing complications among type 1 diabetes is complex.[14] The genes that confer genetic susceptibility and that immunologically compromise the individual may have complex interactions in the causation of type 1 diabetes and complications later on.

BEHAVIORAL AND SOCIAL FACTORS

Access and utilization of medical care are critical issues in diabetes control. In South Carolina, 90 percent of the people with diabetes have some type of health coverage (89 percent for whites and 91 percent blacks). Nearly half of the diagnosed diabetes in South Carolina take insulin (45 percent for whites and 56 percent blacks). However, only one-fourth (29 percent for whites and 22 percent blacks) had heard of "glycosylate hemoglobin or HbA_{1c}." About 36 percent of whites and 35 percent of blacks have had their feet checked in the past year at a physician's office. Approximately 71 percent of whites and 69 percent of blacks had dilated eye exams within the past two years. Among those self reported diagnosed diabetic patients, 59 percent were overweight, over 40 percent were physically inactive, 60 percent had been told they had hypertension, and about 30 percent had been told they had high cholesterol.[8,9]

SURVEILLANCE IN SOUTH CAROLINA

Clearly, the monitoring and assessments of diabetes are important components in diabetes control. These diabetes surveillance activities include the regular updated statistics on diabetes-related risk factors, diabetes prevalence, standards of care among people with diabetes and by health care professionals, utilization of health care services such as ER and hospitalization, mortality, cost, and evaluation of diabetes prevention programs. The data compiled help to set priorities in diabetes prevention.

The surveillance system includes data obtained from numerous collaborating groups. Major existing data include the Behavioral Risk Factor Surveillance System (BRFSS), emergency room visit data, hospital discharge data, data from End Stage Renal Disease Network Six, vital records, and population data. Periodic surveys and studies are conducted. Surveys were completed in diabetes patients, primary care physicians, pharmacists, and community health centers to assess the barriers, standards of practice, needs, and costs.[15-19]

The Burden of Diabetes in South Carolina, officially released in May 1997, is the first comprehensive report documenting the growing burden of diabetes in South Carolina.[3] *The Ten Year Strategic Plan, South Carolina Diabetes Initiative,* is another important milestone for the diabetes community in South Carolina.[6] This report identifies the goals and provides strategies to reduce the growing burden of diabetes.

This data is essential for the planning and implementation of diabetes programs as well as individual practices.[6-20] The data is available through a website at http://www.musc.edu/diabetes or by contacting the Diabetes Initiative of South Carolina. ❐

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DIABETES PATIENT EDUCATION

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DIABETES PATIENT EDUCATION

In 1983, the National Diabetes Advisory Board (NDAB), in collaboration with the American Association of Diabetes Educators (AADE), the American Diabetes Association (ADA), the Centers for Disease Control and Prevention (CDC), and the Juvenile Diabetes Foundation (JDF), developed National Standards for Diabetes Patient Education Programs.[1] The national standards provided the framework of acceptable quality education for people with diabetes. The standards include guidelines for a teaching curriculum for people with diabetes and minimal standards for professional expertise and training requirements. In 1993, the standards were revised and renamed *National Standards for Diabetes Self-Management Education Programs*.[2]

In the past decade, studies have found that educational interventions in adults with diabetes improve patient health outcomes.[3] The Diabetes Control and Complications Trial (DCCT) provided the first comprehensive scientific evidence that intensive management with a goal of normal blood glucose improves metabolic and health outcomes among people with type 1 diabetes. A team approach, as well as the vital role of the diabetes educator/specialist during the DCCT nine-year study, provided overwhelming evidence of the importance of a team approach model.[4] Furthermore, optimal control of blood glucose level to near normal is clinically advantageous to maintenance of health and reduces diabetes microvascular complications in people with type 2 diabetes.[5] It has become increasingly clear that the successful treatment of diabetes is dependent upon formalized diabetes education delivered by a team of health professionals following a prescribed process of assessment and establishing educational objectives, behavioral goals, patient education, follow-up, evaluation, documentation, and reimbursement. Management of diabetes has evolved from what was once a simple treatment plan of insulin and/or oral agents, a meal plan, and an exercise plan into standards of diabetes self-management—a comprehensive program.[2] It is because of this evolution that the Diabetes Initiative of South Carolina (DSC) and the South Carolina Diabetes Control Program (SCDCP)/Department of Health and Environmental Control

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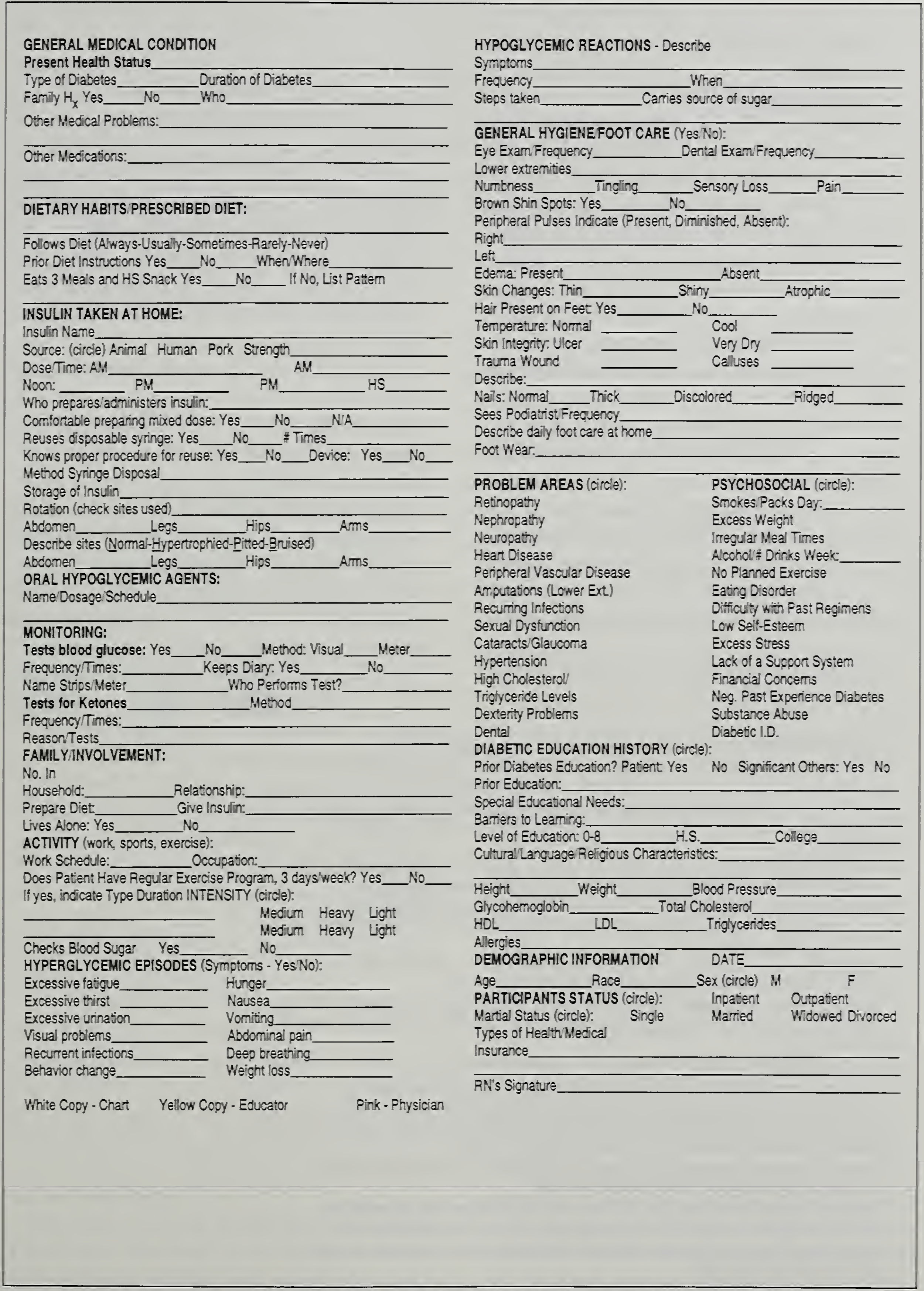


GENERAL MEDICAL CONDITION

Present Health Status____

Type of Diabetes____Duration of Diabetes____

Family H_x Yes____No____Who____

Other Medical Problems:____

Other Medications:____

DIETARY HABITS/PRESCRIBED DIET:

Follows Diet (Always-Usually-Sometimes-Rarely-Never)

Prior Diet Instructions Yes____No____When/Where____

Eats 3 Meals and HS Snack Yes____No____ If No, List Pattern

INSULIN TAKEN AT HOME:

Insulin Name____

Source: (circle) Animal Human Pork Strength____

Dose/Time: AM____ AM____

Noon: ____ PM____ PM____ HS____

Who prepares/administers insulin:____

Comfortable preparing mixed dose: Yes____No____N/A____

Reuses disposable syringe: Yes____No____# Times____

Knows proper procedure for reuse: Yes____No____Device: Yes____No____

Method Syringe Disposal____

Storage of Insulin____

Rotation (check sites used)____

Abdomen____Legs____Hips____Arms____

Describe sites (Normal-Hypertrophied-Pitted-Bruised)

Abdomen____Legs____Hips____Arms____

ORAL HYPOGLYCEMIC AGENTS:

Name/Dosage/Schedule____

MONITORING:

Tests blood glucose: Yes____No____Method: Visual____Meter____

Frequency/Times:____Keeps Diary: Yes____No____

Name Strips/Meter____Who Performs Test?____

Tests for Ketones____Method____

Frequency/Times:____

Reason/Tests____

FAMILY/INVOLVEMENT:

No. In Household:____Relationship:____

Prepare Diet____Give Insulin:____

Lives Alone: Yes____No____

ACTIVITY (work, sports, exercise):

Work Schedule:____Occupation:____

Does Patient Have Regular Exercise Program, 3 days/week? Yes____No____

If yes, indicate Type Duration INTENSITY (circle):

____ Medium Heavy Light

____ Medium Heavy Light

Checks Blood Sugar Yes____ No____

HYPERGLYCEMIC EPISODES (Symptoms - Yes/No):

Excessive fatigue____ Hunger____

Excessive thirst ____ Nausea____

Excessive urination____ Vomiting____

Visual problems____ Abdominal pain____

Recurrent infections____ Deep breathing____

Behavior change____ Weight loss____

White Copy - Chart Yellow Copy - Educator Pink - Physician

HYPOGLYCEMIC REACTIONS - Describe

Symptoms____

Frequency____When____

Steps taken____Carries source of sugar____

GENERAL HYGIENE/FOOT CARE (Yes/No):

Eye Exam/Frequency____Dental Exam/Frequency____

Lower extremities____

Numbness____Tingling____Sensory Loss____Pain____

Brown Shin Spots: Yes____No____

Peripheral Pulses Indicate (Present, Diminished, Absent):

Right____

Left____

Edema: Present____Absent____

Skin Changes: Thin____Shiny____Atrophic____

Hair Present on Feet: Yes____No____

Temperature: Normal ____ Cool ____

Skin Integrity: Ulcer ____ Very Dry ____

Trauma Wound ____ Calluses ____

Describe:____

Nails: Normal____Thick____Discolored____Ridged____

Sees Podiatrist/Frequency____

Describe daily foot care at home____

Foot Wear:____

PROBLEM AREAS (circle):	**PSYCHOSOCIAL** (circle):
Retinopathy	Smokes/Packs Day:____
Nephropathy	Excess Weight
Neuropathy	Irregular Meal Times
Heart Disease	Alcohol/# Drinks Week:____
Peripheral Vascular Disease	No Planned Exercise
Amputations (Lower Ext.)	Eating Disorder
Recurring Infections	Difficulty with Past Regimens
Sexual Dysfunction	Low Self-Esteem
Cataracts/Glaucoma	Excess Stress
Hypertension	Lack of a Support System
High Cholesterol/	Financial Concerns
Triglyceride Levels	Neg. Past Experience Diabetes
Dexterity Problems	Substance Abuse
Dental	Diabetic I.D.

DIABETIC EDUCATION HISTORY (circle):

Prior Diabetes Education? Patient: Yes No Significant Others: Yes No

Prior Education:____

Special Educational Needs:____

Barriers to Learning:____

Level of Education: 0-8____H.S.____College____

Cultural/Language/Religious Characteristics:____

Height____Weight____Blood Pressure____

Glycohemoglobin____Total Cholesterol____

HDL____LDL____Triglycerides____

Allergies____

DEMOGRAPHIC INFORMATION DATE____

Age____Race____Sex (circle) M F

PARTICIPANTS STATUS (circle): Inpatient Outpatient

Martial Status (circle): Single Married Widowed Divorced

Types of Health/Medical Insurance____

RN's Signature____

Figure 1. Diabetes Patient Education Assessment

(DHEC) developed a model diabetes patient education program.[6]

TEAM APPROACH

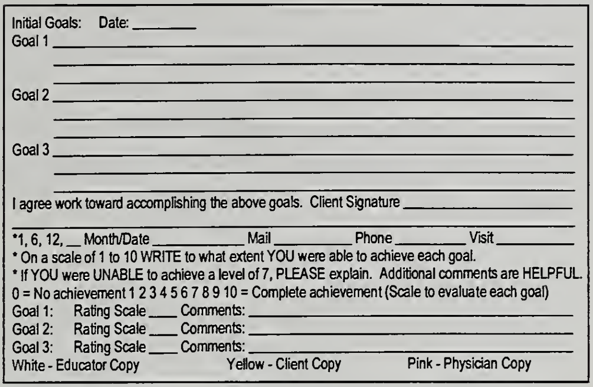
The DCCT demonstrated that diabetes self-management education is vital to the success of diabetes intensive management.[4] Diabetes self-management education is the process of providing the person with diabetes the knowledge and skills needed to perform self-care, manage crises, and make lifestyle changes.[7] Diabetes self-management education is best accomplished by a physician-coordinated team that includes, but is not limited to, diabetes educators, nurses, dietitians, pharmacists, and mental health professionals.[8] It is critical in today's health care that a group of health professionals form a cohesive teaching team to assure that the patients have consistent and accurate information across different disciplines. This team approach develops trust on the part of patients. The team works under the direction of a physician and ensures that ADA's clinical practice recommendations are met.

The physician alone may not easily empower the patient to achieve optimal glycemic control and the acquisition of diabetes self-management skills primarily because of lack of time, facilities, and other resources. The patient who is integrating diabetes self-management into his/her life is required to make numerous clinical decisions on a daily basis. The patient's readiness to learn is dependent upon the patient's belief that the self-management strategies are necessary to meet his or her current needs.[9] Developing a self-management plan and beginning treatment and patient education without involvement of the team, patients, and their families will most likely lead to failure.[10]

The health professional team follows a prescribed approach that begins with the assessment process. It takes continued efforts to achieve optimal control of behavior changes and metabolic and health outcomes for dia-

Content/Outcome Standards Before discharge, the patient and/or s.o. will be able to:	Program Assessment Date/Initial	Content Delivered & Reinforced Date/Initial	Program/Evaluation Date/Initial
DIABETES OVERVIEW–State definition of diabetes mellitus/Type 1 vs. Type 2/general facts			
NUTRITION–Identify importance of planning/maintaining meal Rx Plan, food exchanges, eating out guidelines, changes for sick days and exercise guidelines. Discuss CHO counting.			
PSYCHOLOGICAL ADJUSTMENT/FAMILY/SOCIAL SUPPORT/STRESS–Verbalize feelings, positive coping mechanisms, importance of lifestyle affect on DM control, positive support behaviors and family involvement.			
EXERCISE/RELATIONSHIPS:–State effect of exercise on DM control, daily exercise program and precautions. Discuss relationships among nutrition, exercise, medication and blood glucose levels.			
MEDICATIONS:INSULIN–State type, strength, dose, schedule, action, storage and injection sites. Demonstrate preparation, administration and syringe disposal. **ORAL HYPOGLYCEMIC AGENTS**: State name, dose, action and schedule.			
MONITORING–Demonstrate finger puncture technique/use of visual strips or meter/maintenance/state times/target ranges. State rationale, times and action to be taken for ketone testing.			
HYPOGLYCEMIA/HYPERGLYCEMIA–Differentiate by definition, list causes, signs and symptoms, treatment, prevention of each. Understand rational for wearing Medic-Alert/carrying fast-acting CHO. State sick day guidelines.			
FOOT, SKIN AND DENTAL CARE–List principles of daily foot, skin and dental care.			
CHRONIC COMPLICATIONS–Verbalize main complications of DM, relationship to diabetic control, symptoms, prevention, detection and treatment. (Eyes, kidneys, CV, Neuropathy)			
PRECONCEPTUAL CARE, PREGNANCY AND GESTATIONAL DIABETES–State plan of care; Appt.'s, glucose control and prenatal testing. Identify maternal & neonatal complications.			
BENEFITS, RISKS, AND MANAGEMENT OPTIONS: State benefits and risks of improving glucose control, A1C, lipids, BP and microalbumin. Identify management options.			
BEHAVIOR CHANGE STRATEGIES, GOAL SETTING, RISK FACTOR REDUCTION AND PROBLEM SOLVING–Identify ways to change behavior, set realistic goals, reduce risk factors and problem solve.			
USE OF HEALTH CARE SYSTEMS AND COMMUNITY RESOURCES–Discuss use of health care system and community resources available.			

Figure 2. Diabetes Patient Education Record



Initial Goals: Date: ______
Goal 1 ______
Goal 2 ______
Goal 3 ______
I agree work toward accomplishing the above goals. Client Signature ______
*1, 6, 12, __ Month/Date ______ Mail ______ Phone ______ Visit ______
* On a scale of 1 to 10 WRITE to what extent YOU were able to achieve each goal.
* If YOU were UNABLE to achieve a level of 7, PLEASE explain. Additional comments are HELPFUL.
0 = No achievement 1 2 3 4 5 6 7 8 9 10 = Complete achievement (Scale to evaluate each goal)
Goal 1: Rating Scale ____ Comments: ______
Goal 2: Rating Scale ____ Comments: ______
Goal 3: Rating Scale ____ Comments: ______
White - Educator Copy Yellow - Client Copy Pink - Physician Copy

Figure 3. Diabetes Patient Education Follow-up & Evaluation

betic patients.

ASSESSMENT

The sample assessment tool (Figure 1) was designed as a one-page form to meet the needs of various health professionals from different educational sites, i.e., inpatient, outpatient, home health, pharmacy, and physicians' offices to utilize when documenting patient assessment information. The form has been revised numerous times over the years and currently meets ADA's standards of diabetes patient education assessment.[7]

When designing an assessment tool, one needs to take into consideration who will be completing the form and the length of time needed to do the assessment and set up the diabetes self-management plan. The plan also should include a Diabetes Patient Education Record (Figure 2) and Follow-up and Evaluation (Figure 3), which documents patient education and achievement for diabetes self-management goals over time.

PATIENT EDUCATION

Patient education, a component of the self-management plan, is intimately connected to behavior change. In self-management, education begins with the understanding that the patient requires a continual process of learning and adjusting.[9]

Education sessions should build on existing knowledge obtained from the assessment. Self-managed patients will require the acquisition of specific knowledge as well as the safe performance of certain self-management skills. Basic knowledge and skills specific for the patient who is implementing diabetes self-management include: nutritional guidelines, the effect of food on glycemic control, insulin action and dosage adjustment, exercise, monitoring, management of acute complications, prevention and detection of chronic complications, and behavior change strategies. The acquisition of this information will assist the self-managed patient to make accurate decisions on a daily basis from data collected and to safely adjust the management of their diabetes.

Education can be viewed as a treatment that requires periodic updates. One class or series of classes are not an end-point but rather a step in a continuous life long learning process. Education cannot begin until the patient's commitment to behavior change has been decided and agreed upon. Once obtained, the assessment process can continue regarding the patient's current knowledge, skills, attitudes, and behaviors.[9]

A basic education plan for patients who are new to diabetes self-management includes specific entry level information, followed later by a curriculum for advanced self-management which includes more topic areas.[9] Effective patient education results from building on the patient's existing knowledge base. This learning process occurs over a number of education sessions. For example, a patient may learn blood glucose monitoring in one session and then insulin adjustment techniques in the next session.

Pivotal to the success of diabetes self-management education is the ability of the patient to access expertise for problem solving on a 24-hour basis. A mechanism for this to occur is critical to eliminate unnecessary hospitalizations and emergency room visits for patients. In addition, patients embarking on a self-management plan need ongoing communication with a team of health professionals for problem solving, feedback, and reality-based reinforcement guides.

FOLLOW-UP

Follow-up is necessary to ensure continuity (Figures 2 and 3). It is a major component mandated by the national standards. Three follow-up interactions following the completion of education are required in the first year. This can be an actual visit, mailed questionnaire or a telephone survey. Data tracking is required by national standards. It includes name, age, sex, race, type of diabetes, duration, treatment, number of educational sessions, referrals, payer, pattern of behavior change, and metabolic and/or health outcomes.[7]

EVALUATION

Evaluation is a process that measures the impact of education (Figures 2 and 3). Behavioral goals or changes in behavior and metabolic and health outcomes are measured at periodic intervals after education.[7] Evaluation in a busy practice can be done quickly and easily. A series of questions allows the assessment of knowledge as well as determination of problem-solving abilities. For example, “What would you do if you had given yourself insulin and your restaurant meal was late?” or “What would you do if you woke up one morning with nausea and didn’t feel like eating?”

DOCUMENTATION

Documentation of interdisciplinary communication is required by the national standards. This can be accomplished in a variety of ways. Several copies of the diabetes assessment, patient education record, behavioral goals, follow-up and evaluation, and progress notes (Figures 1, 2, 3) can be easily sent to team members with a copy retained on the medical record and a copy for the diabetes patient education coordinator.

The national standards require teaching of 15 content areas to be documented on the patient education record and goals to be documented in behavioral outcome format and one other outcome measure (e.g., monitoring for complications, lost work or school days, metabolic control, or others). These are to be followed and documented throughout the first year of the evaluation.[7] These forms should be permanent parts of the medical record.

REIMBURSEMENT

Programs that enhance the ability of patients to self-manage their diabetes positively affect the course of the disease in most patients. Although this has been widely appreciated by patients for some time, state and federal legislators, employers, and third-party payers are just beginning to recognize the clinical and economic benefits that come from having a team of health professionals involved in patient care. Currently, 30 states have legislation requiring insurance carriers to pay for diabetes supplies and education for all recipients. Although there is no comparative legislation in South Carolina yet, there are several opportunities for reimbursement for diabetes self-management education. South Carolina Medicaid and Vocational Rehabilitation Departments have programs that will pay qualified providers for supplemental education and management.

While managed care is not as prevalent in South Carolina as in other states, local insurance providers frequently will allow for reimbursement of diabetes education with prior authorization. The expanded Medicare coverage for diabetes outpatient self-management training services and blood glucose monitors and test strips became effective July 1, 1998.[11,12] It permits Medicare coverage of diabetes outpatient self-management training services when a certified provider who meets certain quality standards furnishes these services. A certified provider must meet all of the NDAB standards and be recognized by the ADA. It permits coverage of blood glucose monitors and test strips for individuals with diabetes without regard to the individual’s use of insulin. In addition, regardless of insurance coverage, patients themselves may be willing to pay for services and education they perceive as beneficial.

The South Carolina State Insurance Services is taking an innovative approach by currently sponsoring the Partners in Care, a two-year pilot study in which specially trained pharmacists are getting paid for diabetes management. A step-wise approach that health providers may apply follows: (1) Obtain proper training. Take advantage of classes and review courses offered by DSC, ADA, American Medical Association, National Nurses Association, and other professional organizations, and universities; (2) Obtain proper credentialing. Certified Diabetes Educator (CDE), national recognition program by ADA, or state recognition program by DSC and the SCDCP/DHEC; (3) Employ marketing. a) Communicate with local physicians about your program and services, requesting input on how best your services can benefit their patients; b) Advertise your program and services; and c) Increase exposure by participating in or starting local ADA's chapters or diabetes support groups; and (4) Utilize reimbursement/billing. a) Discuss the reimbursement process with the patient; b) Determine the patient's insurance and financial status prior to enrolling patients in training programs; c) Obtain prior authorization and verification of type of coverage and level of reimbursement; d) Prior to scheduling a self-management patient visit, obtain a certificate of medical need from the primary care provider; e) Document patient education activities including what is taught, outcome goals, and time commitment; f) Use identical diabetes related CPT codes when billing insurance companies; g) Continue to bill for your services and be persistent in following up on denied claims; and h) Apply for grant programs provided by manufacturers of diabetes biotechnology and medication to benefit patients with diabetes.

MODEL DIABETES PATIENT EDUCATION PROGRAM

The Model Diabetes Patient Education Program was implemented in South Carolina in September of 1996 through a partnership between DSC and SCDCP/DHEC. This model program has incorporated the ADA standards, the CDC guidelines, and the South Carolina Medicaid requirements into a single simplified approach to establish a diabetes education program. The Model Program eliminates duplication and enables development and implementation of a diabetes education program in a short period of time. In September 1997, there were two pilot sites for Model Programs recognized in South Carolina, 14 other sites were granted extensions to complete their application process, and six new sites began the process. The DSC and SCDCP/DHEC recognized four additional sites in October of 1998. A diabetes patient education program at a physician's office is also beginning the recognition process. Medicare coverage for diabetes outpatient self-management training services and blood glucose monitors and test strips for all diabetics became effective in July 1998. The DSC and SCDCP/DHEC then adapted its Model Diabetes Patient Education Program to meet all the NDAB standards and be recognized by the ADA.

SUMMARY

Not all medical practices are equipped to provide diabetes self-management training. Physicians can incorporate a team approach in their practice by establishing collaborative relationships with recognized diabetes education programs. The ADA's education recognition program has identified diabetes education programs that meet the National Standards for Diabetes Self-Management Education Programs. This list is available on the ADA's web site at http://www.diabetes.org/recognition and is printed twice a year in *Diabetes Forecast.* The National Certification Board for Diabetes Educators (NDEA) can provide a list of CDEs in your area. The South Carolina Model Diabetes Patient Education Program of DSC and SCDCP/DHEC is an excellent critical step towards obtaining ADA recognition.

❑

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PHYSICIAN OFFICE-BASED DIABETES CARE: COMPARISON TO GUIDELINES FOR CARE

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PHYSICIAN OFFICE-BASED DIABETES CARE: COMPARISON TO GUIDELINES CARE

The facts regarding prevalence and care of diabetes in South Carolina are overwhelming. In 1994, South Carolina ranked second among the states in prevalence of diabetes.[1-3] It is estimated that in 1994, there were 311,092 people with diabetes living in South Carolina. Only half of these have been diagnosed. Diabetes was the underlying cause of death of 873 South Carolinians in 1994. It was a contributing cause in 2,668 deaths in the same year. In 1994, persons with diabetes occupied one in every six hospital beds in South Carolina. Of the major complications of diabetes, the three that are increasing in South Carolina are cardiovascular disease, end-stage renal disease, and lower extremity amputation.

The economic burden of diabetes in South Carolina is enormous.[4] In 1994, hospital charges for individuals with diabetes as primary diagnosis were $61 million. Hospital charges with diabetes as secondary diagnosis were $651 million. Hospital charges of the cost of care of diabetes indicates that the cost of diabetes in South Carolina approaches $1 billion yearly.

The geographic distribution of health providers is such that in South Carolina, 23 of the 46 counties are classified as health professional shortage areas. There is a shortage of physicians with specialty training in fields such as endocrinology that address diabetes. There are insufficient numbers of other health professionals, including certified diabetes educators and podiatrists, who play key roles in the care of diabetic patients. When patients with diabetes do see a physician, they are not always receiving the quality of care recommended by the American Diabetes Association. Lack of insurance coverage may be a barrier but Health Maintenance Organization (HMO) data show that despite insurance coverage, ADA guidelines are not always followed.

Society is holding U.S. physicians increasingly accountable for the cost-effectiveness and quality of care provided to persons with diabetes. Until recently, this scrutiny has focused primarily on hospitalized patients but is now shifting to ambulatory care. To monitor quality in the ambulatory sector is a difficult task because of the large array of services provided in that setting.[5] Almost 16 million persons in the United States have diabetes mellitus and 90 to 95 percent of those have type 2 Diabetes Mellitus.[6-10] Persons with diabetes are at increased risk for morbidity and mortality and consume a large share of health care resources. Diabetes is associated with complications which cause much of the morbidity and mortality and may be preventable. Early treatment of complications of diabetes such as nephropathy, retinopathy, and neuropathy may, in some cases, slow or halt the progression of diabetic complications.[11-16] People with diabetes rely largely on their primary health care provider (PCP) for management of their diabetes, and health care reform emphasizes the role of PCPs in managing the overall health care. Therefore, the PCP must provide care that meets the current guidelines for diabetes management. To begin to assess the care of patients with diabetes in South Carolina, we have conducted a self-report survey of management practices as well as office-based review of diabetes care by PCPs.[17]

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Table 1. Overview of Recommended Diabetes Management

Parameter	Frequency	Goal	Action	Treatment
Metabolic Control				
HbA1c	Quarterly	≤ 7%	≥ 8%	Diet, Exercise, Oral Agents &/or Insulin
Self-monitoring blood glucose	As necessary for glycemic control			Stepped approach to glycemic control
Preprandial		80-120 mg/dL	>140 mg/dL	
Bedtime		100-140 mg/dL	>160mg/dL	
Technique check	≥ Annually	Proficient	Not proficient	Referral for teaching
Hypoglycemic episodes	Each visit	No episodes	Episodes occur	Change in lifestyle or treatment
Hyperglycemic episodes/ketonuria	Each visit	No episodes	Episodes occur	Change in lifestyle or treatment
Cardiovascular Assessment*				
Blood Pressure	Each visit	≤ 135/85 mm Hg	> 135/85 mm Hg	ACE Inhibitors
Lipid Profile:	≥ Annually and quarterly if abnormal			Stepped approach to lipid control with lipid lowering medications, diet, and exercise
Cholesterol		< 200 mg/dl	> 200 mg/dl	
LDL Cholesterol		< 130 mg/dl[H]	> 130 mg/dl	
HDL Cholesterol		> 35 mg/dl (men) > 45 mg/dl (women)	< 35 mg/dl < 45 mg/dl	
Triglycerides		< 250 mg/dl	> 250 mg/dl	
EKG	Annually	Normal	Abnormal	Referral to Cardiology
Complication Assessment				
Retinopathy: Dilated Eye Exam by Eye Care Specialist	Annually	Normal	Abnormal	Referral to Ophthamology
Nephropathy: Microalbumin	Annually	< 30 mg/24 hours	≥ 30 mg/24 hours	Repeat test and ACE Inhibitors Glycemic Control
Neuropathy: Peripheral Sensory	Annually	Intact sensation	Abnormal	Protective and Preventative Education and Glycemic Control
Feet Exams	Each Visit	No complications	Corns, Callouses, Diminished Pulses	Referral to Podiatry
Oral/Periodontal	Each Visit	Healthy gums/teeth	If no routine dental visits and hygiene	Referral for Dental Hygiene & Care
Lifestyle Assessment				
Exercise	Each Visit	20-45 minutes on most days	< 3 times weekly	Exercise counseling related to type, frequency, duration, intensity.
Smoking, Tobacco Use	Each Visit	No use	Any use	Smoking Cessation Program
Nutrition	Annually	Healthy eating daily Weight control Metabolic control	Poor glucose or lipid control or increased weight	Referral for nutrition counseling
Overall Diabetes Self-Management Practices	Annually	Healthy diabetes management with metabolic control	At least annual diabetes education update	Referral to diabetes educator or formal diabetes education classes

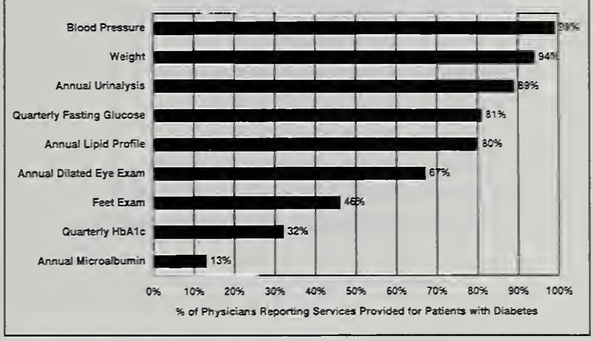
* In patients who have additional cardiovascular risk factors (i.e., elevated blood pressure or LDL-C, low HDL-C, hypertriglyceridemia, albuminuria, obesity, insulin resistance, strong family history of cardiac disease) daily low dose (81 mg) enteric-coated aspirin is recommended.[19]

[H] LDL-C < 100 mg/dl if cardiovascular disease is present. Because people with diabetes are at an increased risk for myocardial infarction or cardiovascular death, many experts recommend that LDL-C goal should be below 100 mg/dl in people with diabetes.[19]

OVERVIEW OF ADA GUIDELINES

Overall, therapeutic goals for people with diabetes are to achieve a good quality of life, a reasonable body weight, and a management plan which is acceptable to the patient and the health care team.[18] At the initial visit (or shortly thereafter), it is important to do a complete history, physical examination, and laboratory tests which are used to evaluate glycemic control, detect early signs of complications and guide overall diabetes management. An overview of diabetes management guidelines is presented in Table 1. The American Diabetes Association issues specific guidelines for metabolic and blood pressure control which are now generally accepted.[19] These guidelines are based on the rationale that metabolic and blood pressure control delay or prevent complications, and early detection and treatment of complications reduce morbidity, mortality, and costs.

Figure 1. Self-Reported Office Base Practices by S.C. Primary Care Physicians[20]



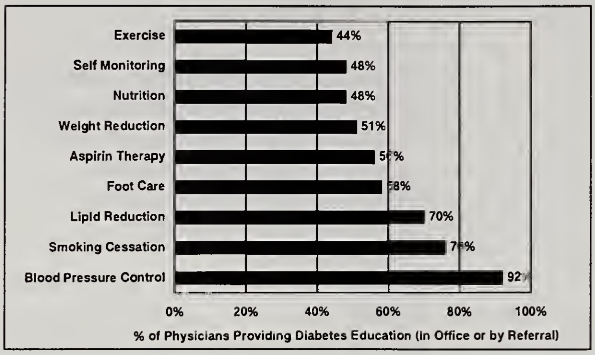
SELF-REPORTED SURVEY OF PRIMARY CARE PROVIDERS' PRACTICES

To assess the adherence of PCPs to current diabetes care guidelines, a cross-sectional survey was mailed to 800 randomly selected PCPs in South Carolina.[20] The ADA standards of medical care for patients with diabetes were used to evaluate desired practices for physicians.

Fifty-six percent (444) responded to the survey.[20] PCPs reported that most patients (82 percent) were seen according to recommend-

Table 2. Resources Used by Primary Care Physicians and Their Staff[20]

Resources Used	Percent (%) of PCP Practices Reporting Use of Resource
Referral to dietitians or nutritionists	90
Patient diaries for self-monitoring of blood glucose	89
Printed patient education materials	85
Referral to diabetes educators	81
Printed guidelines for diabetes care	79
Consultation with MD specialists (other than endocrinologists/diabetologists)	79
Continuing education conferences on diabetes	78
Chart reviews	75
Reminders such as chart labels, stickers	63
Chart flow sheets for diabetes care	58
Audio-visual patient education materials	56
Referral to MD diabetologists	55
Office-based training for diabetes care	53
Audio-video continuing education programs	50
Referral to nurse practitioner or physician assistant for care or education	40
Health Communication Network programs	34
Computerized medical records	25



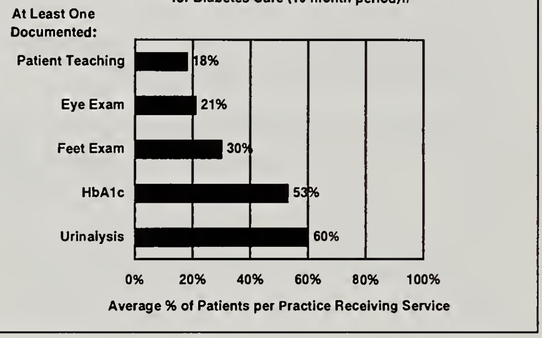


Figure 3. Record Review of Recommended Services for Diabetes Care (19 month period)[17]

ed guidelines and information about patients' medical history was collected (except for questions about sexual functioning) for 73 percent of their patients. The self-reported results for physical examination and laboratory tests are shown in Figure 1 and for patient teaching in Figure 2. Factors associated with practice behaviors included attitudes of PCPs and their patients, PCPs' and staff's skills and abilities, a supportive health care environment including support from staff, colleagues, hospitals, and third party payors, as well as beliefs that health care is cost-effective, cost-beneficial, and prevents complications. Use of any written guidelines or checklists for diabetes care and education was one variable that was most highly associated with quality of care. Table 2 gives a list of resources currently used by PCPs and their staff. The most frequently used resources are referrals to dietitians and patient monitoring and education materials.

OFFICE-BASED PROJECT BY CAROLINA MEDICAL REVIEW

Carolina Medical Review (CMR) examined medical records from 11 practices, involving 53 physicians to assess practice patterns for care of Medicare patients with diabetes.[17] A 19-month time frame was chosen, and 587 patient records were used in the analysis. There was a total of 3,492 office visits related to diabetes included in the review. The average number of visits was 6.1, ranging from one to 31 visits per patient. The average number of visits per patient ranged from 3.1 to 9.7 for the individual offices. Fifteen patients did not have any diabetes related visits during the study time frame. Practice patterns related to office visit care, laboratory screenings (such as glycosylated hemoglobin and urinalysis), foot exams, and diabetes patient education were examined. Seventy-seven percent of patients were Caucasian, 19.3 percent were African-American, and 4.1 percent did not have race documented in the medical record. Forty-three percent were males and 57.1 percent were females. The ages of the patients ranged from 29 to 98 years with the average age being 72.3 years.

Review of patient records revealed that 71.4 percent of the patients had documented hypertension, 37.6 percent obesity, 39.5 percent coronary artery disease, 19.9 percent peripheral vascular disease, 8.3 percent retinopathy, and 28.8 percent neuropathy.[17] Nephropathy was recorded for 11.4 percent of patients, and 71.6 percent of these had an angiotensin converting enzyme (ACE) inhibitor prescribed during the study period.

On average, 18 percent of the patient records had documentation of a referral for diabetic teaching (Figure 3). In the best case, less than a third of patients within the practice were referred. We found that, overall, 60 percent had at least one urinalysis, and overall, 53 percent had hemoglobin A1c and 58 percent of those on insulin received at least one glycosylated hemoglobin during the 19-month review period. Thirty percent of the visits had documented foot exams, and 21 percent of the patients had documentation stating an eye care professional had been seen during the review period.

Two previous studies of inpatient care for

Table 3. HMOs Efforts to Monitor Recommended Services for Persons with Diabetes by Regions of U.S.[23]

Descriptive Variable Location in US	Eye exam % of patients	Glycohemoglobin % of patients	Urinalysis % of patients	Cholesterol % of patients	Flu shot % of patients	Foot exams % of patients
Southeast	50	25	50	50	50	25
Northeast	85	85	77	77	62	39
Midwest	71	29	14	14	43	0
Central	93	64	50	43	43	50
West Coast	96	57	57	46	46	36

Sources: United States General Accounting Office, 1997

diabetes were completed before this office-based care study began. The inpatient studies emphasized that screening and maintenance care for diabetes are more likely to occur in the outpatient setting.[17] Results from the office-based care review indicate that there is great variability and overall need for improvement in the care of the patient with diabetes in the ambulatory care settings. Compliance with the ADA guidelines appears low, but poor documentation must also be considered.

HMOs POLICIES FOR CARE OF PATIENTS WITH DIABETES

It is useful to look at the impact of managed care on diabetes care in the Southeast. A national telephone survey of nearly half of the current Medicare risk-contract plans was conducted to evaluate diabetes management guidelines used by HMOs.[5,21,22] Plans were selected that had (1) enrollment of at least 1,000 Medicare beneficiaries (as of April 1996) and (2) a contract effective date no later than December 31, 1993. Of the 201 Medicare risk-contract HMOs operating in the U.S. in April 1996, 90 plans met these criteria and representatives of 88 plans were interviewed.

The survey of 23 multiple-choice and open-ended questions was used to determine each HMO's specific approach to diabetes management.[22] The 88 HMOs reported a wide range of diabetes management efforts. About 58 percent have identified specific performance goals for diabetes care. These efforts focused on educating providers about recommended services and patients about self-management. Many of the HMOs used similar techniques for improving care.[22]

In contrast to other areas of the U.S., HMOs in the Southeast used more case management for diabetes (82 percent versus 44 to 79 percent for other regions), less clinical practice guidelines (55 percent versus 59 to 94 percent), less tracking of patients with diabetes (36 percent versus 65 to 79 percent), less education for patients (36 percent versus 78 to 88 percent) and less continuing education for physicians (46 percent versus 56 to 95 percent) than other regions of the U.S.[22] Table 3 shows specific practices in HMOs in the Southeast in comparison to other regions of the U.S. Several practices, particularly the performance of glycohemoglobin and foot exams, are monitored less frequently by HMOs in the Southeast. This may be due to the fact that HMOs were established later in this region.

GAO REPORT ON MEDICARE BENEFICIARIES WITH DIABETES

Another large review of diabetes care practices was done by the General Accounting Office (GAO) of the United States. The GAO reported to the Chairman, Subcommittee on Health and Environment, Committee on Commerce, House of Representatives in March 1997 on the frequency with which Medicare beneficiaries with diabetes received ADA recommended monitoring services.[23] A cohort of approximately 168,000 Medicare beneficiaries with diabetes were reviewed in 1994. Medicare beneficiaries with diabetes had the opportunity to receive these services

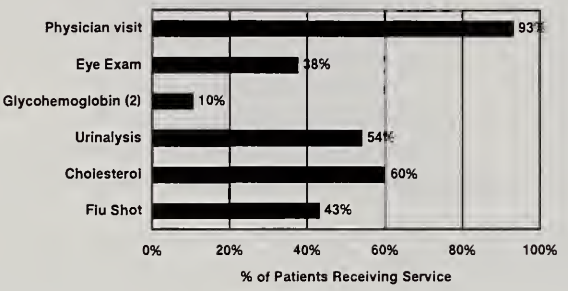


Figure 4. Medicare Claims Review of Annual Diabetes Care (Fee-for Service) in South Carolina[23]

because 94 percent of them had at least two physician visits in 1994. The mean number of physician visits was 9.5. Nationally, less than half of these beneficiaries with diagnosed diabetes received an eye exam (42 percent), only 21 percent received the two recommended glycohemoglobin tests, and only about half (53 percent) had a urinalysis. However, for South Carolina beneficiaries, 38 percent, 10 percent, and 54 percent received eye exams, two glycohemoglobin tests, and a urinalysis, respectively. Based upon this survey, South Carolina was rated in the bottom 10 percent of the states in providing quality care to persons with diabetes (Figure 4).[23]

Health Care Financing Administration (HCFA) has cited diabetes as a major health problem in the Medicare population and has targeted the disease for special new initiatives to improve physician and patient awareness, service delivery, and patient health outcomes. Some of HCFA's initiatives include the Nationwide Diabetes Education Program, Local Projects to Encourage Utilization, and Multistatistic Evaluation of Intervention Strategies. HCFA has initiated a variety of strategies to determine those that are effective and how they can be carried out in a cost-effective approach.[21]

SUMMARY

Over the past decade, we have seen a significant increase in hospitalizations in South Carolina for the major complications of diabetes: myocardial infarcts (+68 percent), amputations (+61 percent), end stage renal disease (+85 percent), diseases of blood vessels (+100 percent), and eye complications (+52 percent). Many of these late stage complications can be prevented or their progression slowed down by early recognition and institution of intensive, well-defined preventive strategies. Independent surveys reviewed above indicate that such preventive practices are not being fully utilized in South Carolina. As one key example, less than 50 percent of people with diabetes receive self-management education. A number of simple and relatively inexpensive laboratory and physical examinations which would trigger preventive and remedial therapy are also performed at less than adequate frequency.[1] The challenge is for all to use these examinations to guide therapy and to continue to monitor and intervene to prevent complications of diabetes.

The DSC Board of South Carolina has developed a *Ten Year Strategic Plan* with nine major goals to improve diabetes care and outcomes in South Carolina. To improve office-based care of diabetes in South Carolina, all health professionals must assume responsibility for closely monitoring each person with diagnosed diabetes and assure that glycemic control is optimized. Early signs of complications must be recognized and interventions to limit their progression utilized. Screening of high-risk individuals to identify the estimated one-third of persons with diabetes who are undiagnosed, targeted education programs to the primary care professionals who deliver the majority of care to individuals with diabetes, implementation of the proven, cost-effective measures that can prevent (postpone) the complications of diabetes, monitoring of the health care delivery system and addressing the potential barriers to adequate care for all persons with diabetes are essential steps to decrease the burden of diabetes for South Carolinians (Table 1). ❐

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COMMUNITY PROGRAMS AND SCREENING RELATED TO DIABETES AND ITS COMPLICATIONS

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COMMUNITY PROGRAMS AND SCREENING RELATED TO DIABETES AND ITS COMPLICATIONS

Disturbing state and national statistics on diabetes and its complications suggests that we must broaden our approach beyond traditional treatment of the individual in the health provider's office to a more community-oriented approach. Both the large number of persons who go untreated and the lifestyle issues suggest that a comprehensive, community-oriented approach may be necessary to reduce morbidity and mortality due to diabetes. Approximately one-third of persons with diabetes remain undiagnosed, and less than 50 percent of persons with diabetes receive the recommended care to detect and prevent complications.[1-8] Additionally, those who receive the recommended care from their health provider face the challenge of daily self-management of diabetes. Individual self-management health decisions are influenced by multiple pressures from family, peers, the community, and the culture. Optimal care is enhanced by social support from family and friends, quality diabetes education that includes skills for changing behavior, and community support for healthy behavior change to assist persons with diabetes to lead healthier lifestyles.

Although standards of care for diabetes have been widely disseminated to health providers since the late 1980s, care providers have been slow to adopt these recommendations, and persons with diabetes may not receive the recommended screening and care for diagnosing and treating diabetes.[3-8,9,10] Provider and patient beliefs and attitudes related to diabetes care are major barriers to improved outcomes.[11] Thus, we must work to change community norms related to diabetes care and management if we are to improve health outcomes.

Community-oriented care for diabetes is a newer model in which a health care practice

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or group of providers collaboratively join with community members and organizations to systematically identify and address problems related to diabetes for a defined population. The health provider(s) combines the care skills for diabetes with the principles of epidemiology and community education to address an identified problem or need in the community.[12] A plan is developed, implemented, and evaluated to determine the effect on the identified diabetes problem.

The purpose of this article is to review current community-based programs in South Carolina and to present an overview of recommendations for community screening programs for identifying those at risk for diabetes and its complications. Data from one community-based screening program is presented in the hopes that health care providers will recognize the risks for complications, and incorporate screening for early signs of complications into ongoing diabetes office-based care.

COMMUNITY-BASED PROGRAMS IN SOUTH CAROLINA

In South Carolina, a number of community-based programs for addressing diabetes and its complications are increasing. The following is an overview of current diabetes community programs.

DIABETES TODAY is a Centers for Disease Control and Prevention-approved, interactive program designed to educate community leaders to plan and implement community-based diabetes programs. The program is coordinated by the South Carolina Diabetes Control Program (SC DCP)/Department of Health and Environmental Control (DHEC) and is community-based and community-owned. The initial training for the course provides health professionals and volunteers with the skills and information needed to plan, implement, and evaluate community-based programs for diabetes. There are seven active Diabetes Today Programs across the state. These include Bibleway Church, Goodwill Baptist Health Ministry, Second Union Baptist Health Awareness Ministry in Richland County, Georgetown County Diabetes CORE in Georgetown, Mount Moriah Baptist Church Health Ministry, Mountain Springs Baptist Church in Anderson County, and Mount Pisgah Baptist Church in Orangeburg County. Specific activities carried out by these groups include walking clubs and aerobic classes, community health fairs, and monthly or quarterly diabetes education sessions for community members with diabetes. The Diabetes Today program in Georgetown County collaborated with the First Lady Mary Wood Beasley's Health Campaign to conduct a countywide walk and press conference to kick off their program in the Fall of 1997.

CHARLESTON'S ENTERPRISE HYPERTENSION AND DIABETES MANAGEMENT AND EDUCATION PROGRAM was developed by the MUSC Diabetes Center and the College of Nursing in response to identified community needs to address diabetes and hypertension education and management. The program works with the community to provide community-based diabetes education and case management, along with foot care and eye screening, to reduce complications and improve outcomes for diabetes and hypertension. Currently, a primary care clinic that focuses on creating an environment to maximize learning about diabetes self-management is being developed.

DIABETES HEAD TO TOE PATIENT EDUCATION PROGRAM is a community-based education program that focuses on underserved areas of South Carolina and is coordinated by the MUSC Diabetes Center. Certified diabetes educators travel to communities to present programs about diabetes, its causes, treatment, and complications to interested lay groups throughout the state.

PARTNERS IN WELLNESS is a collaborative effort between the MUSC, SC Area Health Education Consortium, and the state's historically black colleges and universities that is designed to educate college students about diabetes and hypertension and community programs. The focus is on attracting more African American students into health professional education programs and health careers.

Figure 1. Screening Form for Persons with Diabetes

I have been told by my doctor, nurse, or physician assistant that I have sugar in my blood, diabetes, sugar diabetes, or a touch of diabetes. I was first told that I had diabetes in (Year)__________.

Name: ______________________________ Phone: ______________________
Address: ______________________________ Date of Birth: ______________________
Family Doctor: ______________________________ ID#: ______________________

M Blood Pressure ____________ [ ] Normal [ ] Follow-up needed. Blood pressure is the force of blood against the wall of blood vessels. Two levels of blood pressure are measured: the highest (systolic) occurs when the heart pumps blood into the blood vessels, and the lowest (diastolic) occurs when the heart rests. Our goal is for your blood pressure to be less than 135/85. If your blood pressure is higher that 135/85, see the doctor to determine how to best lower your blood pressure. High blood pressure can damage the heart, brain, blood vessels, and/or kidneys.

M Hemoglobin A_{1c} ____________ [ ] Normal [ ] Follow-up needed. Hemoglobin A_{1c} sums up how much sugar (glucose) has been in the blood during the past 3-4 months. The number helps determine the balance between diet, exercise, ands medications to control diabetes. This test is recommended usually every 3-6 months. Our goal is to have Hemoglobin A_{1c} less than 8. If 8 or more, see the doctor to see what can be done to better control diabetes.

M Microalbumin in Urine __________ Measurement of microalbumin helps to determine if our kidneys are healthy, and even a small amount of albumin in the urine can be a sign of kidney disease. This test is usually recommended once each year. Our goal is to have no albumin (negative) in the urine. If albumin is not negative, see the doctor to determine if medication can help protect your kidneys.

M Cholesterol ________ mg/dl [ ] Normal [ ] Follow-up needed. Cholesterol is a substance in food and produced by the body. Our body needs some cholesterol but too much can make fats stick to the walls of the arteries and cause a disease that decreases or stops circulation. Our goal is to have cholesterol less than 200 mg/dl. If more than 200, see the doctor to learn how to lower cholesterol.

M Foot Screening [ ] Normal [ ] Follow-up needed (see attached). Foot inspection and screening can identify signs and symptoms related to circulation problems, nerve damage, or infections which can cause serious foot problems. Controlling your glucose and not smoking can help protect your feet. If your feet tingle, burn, or hurt, or if you are not able to feel touch, heat, or cold, tell your doctor or nurse. Always wear shoes and socks and watch for dry, cracked feet or corns, blisters, sores, scratches, or infections. Ask your doctor or nurse to look at your feet each visit, and tell hem about any changes in your feet, no matter how small.

M Eye Screening [ ] Normal [ ] Follow-up needed (see attached). Diabetic eye disease is a serious problem that can lead to loss of sight. Have a dilated eye exam each year and follow recommendations. Controlling your glucose and keeping your blood pressure under control can help to prevent diabetic eye disease. If your vision is blurred, or if you=re seeing rings around lights, dark spots, or flashing lights, be sure to tell your doctor or nurse. Treating eye problems early can help save sight. A dilated eye exam is usually recommended once each year.

Educational and counseling recommendations related to diabetes control:

____
____
____

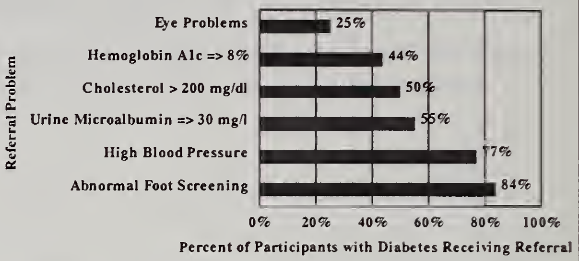
Counselor: ______________________ Signature of Patient: ______________________
(Informed Consent/Release of information on file)

PROJECT SUGAR is a research study within the Division of Endocrinology, Diabetes, and Medical Genetics at MUSC that provides community screening and education focusing on African Americans in coastal South Carolina. The project has purchased a mobile health unit which is staffed by nurses who work with this research project. The van has participated in over 25 community health screenings and more than 1,500 persons have been educated about risk factors for diabetes.

IT'S YOUR BODY: A MINI-MEDICAL SCHOOL is a program sponsored by the Medical University of South Carolina and facilitated through the Office of Public Education at selected colleges throughout South Carolina. The program helps participants develop an understanding of health science, increases their comfort with seeking medical help, and motivates them to develop healthy lifestyles. One of the educational sessions addresses diabetes prevention and management.

PRO-HAMPTON COUNTY'S DIABETES CONNECTION is a Healthy Communities Initiative with a focus on addressing the problems of diabetes in Hampton County. This community effort began with an assessment of the needs of persons with diabetes and has focused on grass roots efforts to address those needs. A recent community-wide broadly based screening program conducted at Hampton Regional Medical Center, focused on identifying those at increased risk for developing diabetes and on persons with diabetes who were at risk for developing complications of diabetes. The screening form for persons with diabetes is shown in Figure 1. Approximately 25 percent of those at increased risk (N=99) for diabetes (according to the American Diabetes Association Risk Test) had elevated plasma glucose values that needed further evaluation by their primary care provider. The results of the screening for those with diabetes (N=60) are shown in Figure 2. From 50 percent to 84 percent of these individuals with diabetes were referred for further evaluation for high blood cholesterol, urinary albumin, blood pressure, or abnormal foot examinations. A screening manual is currently under development by Low Country Area Health Education Center and the DSC.

Figure 2. Referrals for Further Evaluation PRO-Hampton County Diabetes Screening, March, 1998



THE AMERICAN DIABETES ASSOCIATION COMMUNITY PROGRAM IN SOUTH CAROLINA DIABETES INFORMATION AND ACTION LINE (D.I.A.L.) is a telephone help line and referral system. Callers can receive up-to-date information on diabetes or be referred to a health care professional in South Carolina by dialing 1-800-DIABETES. A trained staff and volunteers answer questions, mail current information, and serve as a guide to community resources.

DIABETES ALERT DAY is held on the last Tuesday in March with a nationwide call to take the risk test and know the score. Of the 15.3 million with diabetes in the U.S., about one-third do not know they have it. In South Carolina, an estimated 312,000 people have diabetes and the emphasis is on identifying those with increased risks and encouraging them to request screening for diabetes from their primary care provider.

DIABETES SUNDAY is a program sponsored by the American Diabetes Association and expanded by the Diabetes Initiative. The focus is on disseminating information about diabetes through local churches during February.

ADA CAMP ADAM FISHER for children with diabetes is a week long camping experience for children and adolescents seven to 17 years old with diabetes. The camp is held at the Cooper 4-H Leadership Center in Summerton, South Carolina. Camp provides young people with an organized environment to practice healthy management skills and interact with others with diabetes. Volunteers and health professionals with expertise in diabetes function as camp counselors.

AFRICAN AMERICAN INITIATIVE is a combined effort of the American Diabetes Association's African American Program, South Carolina Diabetes Control Program/DHEC, and the Diabetes Initiative of South Carolina to educate African Americans that DIABETES IS A SERIOUS DISEASE THAT CAN BE CONTROLLED. The focus is on raising awareness about risk factors and ways to avoid or delay complications and improving outcomes for African Americans. Each year, the group sponsors a conference emphasizing diabetes as a special health problem for African Americans.

OTHER NATIONAL INITIATIVES WITH AN EMPHASIS ON DIABETES

THE NATIONAL DIABETES EDUCATION PROGRAM (NDEP) is a federally-sponsored initiative that involves public and private partners to improve the treatment and outcomes for people with diabetes, to promote early diagnosis, and, ultimately, to prevent the onset of diabetes. The NDEP's objectives are to: (1) increase public awareness of the seriousness of diabetes, its risk factors, and potential strategies for preventing diabetes and its complications; (2) improve understanding about diabetes and its control and to promote better self-management behaviors among people with diabetes; (3) improve health care providers' understanding of diabetes and its control and to promote an integrated approach to care; and (4) promote health care policies that improve the quality of and access to diabetes care.

DIABETES 2000 is a long-term education project of the American Academy of Ophthalmology sponsored by the South Carolina Society of Othalmology aimed at eliminating preventable blindness for persons with diabetes by year 2000. New advances and treatment guidelines for the medical and surgical management of diabetic eye disease, which can reduce the risk of blindness by 90 percent, are being emphasized through continuing education. The goals of the project are to: (1) provide educational opportunities for ophthalmologists and other physicians who care for persons with diabetes to update their knowledge and skills based on the latest information from clinical trials and other sources; (2) emphasize the importance of early diagnosis and treatment and the role of the ophthalmologist as the physician uniquely qualified to treat diabetic retinopathy; (3) strengthen relationships with primary care and other physicians who serve persons with diabetes through collegial and organizational contacts, joint meeting, and symposia; and (4) work with other diabetes-related organizations and care-giver projects to better identify the extent of the problem and the barriers to effective ophthalmologic treatment for all persons with diabetes who need eye care.

COMMUNITY SCREENING PROGRAMS FOR IDENTIFYING UNDIAGNOSED DIABETES

In addition to community, state, and national initiatives, the most frequently requested activity by the lay public is community screening programs to identify those needing further interventions for possible diabetes. The evidence on community screening programs for diabetes is inconclusive. Cost-effectiveness for reducing morbidity and mortality associated with diabetes in presumably healthy individuals has not been documented. However, community screening programs can enhance public awareness, but true efficacy is unknown.[9]

Community-wide screening programs for identifying individuals at high risk for having undiagnosed diabetes can be accomplished by a verbal or written questionnaire (Figure 3). Individuals found to be "at risk" or those with any diabetes symptoms should be referred to a health care provider for evaluation and glycemic testing. Glycemic testing in the community may duplicate primary care

Figure 3.

Could You Have Diabetes and Not Know It?

American Diabetes Association®

Take the Test. Know the Score.

Nearly 14 million Americans have diabetes - and half of them don't even know it! Take this test to see if you are at risk for having diabetes. Diabetes is more common in African Americans, Hispanics and Native Americans.
If you are a member of one of those ethnic groups, you need to pay special attention to this test.

To find out if you are at risk, write in the points next to each statement that is *true* for you. If a statement is *not true*, put a zero. Add your total score.

1. My weight is equal to or above that listed in the chart. Yes 5 _____

2. I am under 65 years of age and I get little or no exercise during a usual day. Yes 5 _____

3. I am between 45 and 64 years of age. Yes 5 _____

4. I am 65 years old or older. Yes 9 _____

5. I am a woman who has had a baby weighing more than nine pounds at birth. Yes 1 _____

6. I have a sister or brother with diabetes. Yes 1 _____

7. I have a parent with diabetes. Yes 1 _____

Total

Score 3-9 points

If you scored 3-9 points, you are probably at low risk for having diabetes Now. But don't just forget about it. You may be at higher risk in the future. Maintaining a healthy weight and regular exercise can help you Reduce your risk.

Score 10 or more points

If you scored 10 or more points, you are at high risk for having diabetes. Only a doctor can determine if you have diabetes. See a doctor and Find out for sure.

At-Risk Weight Chart

Height feet/inches without shoes	Weight Pounds without clothing	
	Women	Men
4' 9"	134	
4' 10"	137	
4' 11"	140	
5' 0"	143	
5' 1"	146	157
5' 2"	150	160
5' 3"	154	162
5' 4"	157	165
5' 5"	161	168
5' 6"	164	172
5' 7"	168	175
5' 8"	172	179
5' 9"	175	182
5' 10"	178	186
5' 11"	182	190
6' 0'		194
6' 1"		199
6' 2"		203
6' 3"		209

The chart above shows weights that are 20% heavier than what is recommended for men and women with a medium frame. If your weight is at or above the amount listed for your height, you may be at risk for diabetes.

Diabetes Facts You Should Know

Diabetes is a serious disease that can lead to blindness, heart attack, stroke, kidney failure and amputations.
Diabetes is the fourth-leading cause of death by disease in the United States, killing more than 160,000 people each year.

Some people with diabetes have symptoms. If you have any of the following symptoms, contact your doctor:

extreme thirst • blurry vision from time to time • frequent urination
unusual tiredness or drowsiness • unexplained weight loss

Pregnant women should be tested for diabetes between the 5th and 6th months of pregnancy.

For more information on diabetes, call the American Diabetes Association at 1-800-DIABETES (1-800-342-2383) efforts if recommended office-based screening of blood glucose is offered as part of ongoing primary care. Occasionally, persons participating in a community health screening have even canceled their primary care appointment stating, “I am healthy.” and “I do not need to see my doctor.” However, other individuals attribute community screening programs with early detection of diabetes and preventing major problems.

Cutoff Values for Screening Tests that Warrant Additional Testing and Evaluation by a Health Care Provider

FPG ∃ 126 mg/dl (7.0 mmol/l)
or
Fasting capillary whole blood glucose
∃ 110 mg/dl (6.1 mmol/l)

FPG, fasting plasma glucose, is the preferred test. Fasting is defined as no food or drink other than water for eight hours.

Source: Diabetes Care 1998; 21(Suppl 1):S1-S98.

GLYCEMIC TESTING IN COMMUNITY SCREENING PROGRAMS

Some general guidelines are listed below:

- Glycemic testing at community screening programs must be under the close supervision of a clinician who has specific training in quality assurance procedures for testing, evaluation, and follow-up.
- Glycemic testing is indicated for high risk individuals only. High risk persons may be identified through use of a questionnaire (Figure 3).
- Minors, individuals with diagnosed diabetes, and pregnant women should not receive glycemic testing in community programs.[9] (Note: Those with diagnosed diabetes may benefit from self-management training and monitoring by diabetes educators. Programs that check home monitoring systems and techniques for monitoring may assist persons with diabetes in improving management.)
- The screening test of choice is the fasting plasma glucose determined from venous blood sample.
- Testing of capillary blood glucose (finger stick) is not the recommended procedure. Capillary whole blood glucose values are 10 to 15 percent lower than venous (plasma) blood glucose values. Testing with a capillary blood glucose meter used for self blood glucose monitoring is not considered a diagnostic procedure even if confirmed on two occasions.

Other considerations for community screening programs:

- Community screening programs must follow OSHA guidelines.
- Personnel conducting screening programs must be adequately trained and demonstrate competency in testing, policies, and procedures. The topics should include:
  1. How to screen for risk factors.
  2. Performance of glucose test, including obtaining sample and proper use of glucose measurement device.
  3. Quality control for the glucose measurement device.
  4. Collection, retention, and distribution of screening test data.
  5. Infection control procedures and their rationale.
  6. Waste disposal procedures.
  7. Counseling of clients about results.
  8. Familiarity with referral procedures and community health care resources.
- All persons screened must be provided with a written record containing:
  1. Individual’s name, address, and telephone number.
  2. List of identified risk factors for diabetes.
  3. The date of test, type of test, test results, and a statement about the possibility of a false positive or false-negative result.
  4. For an individual with positive screening test, a statement that he or she should seek further evaluation by a health care provider.

- Follow-up should be conducted on all individuals who have positive tests to determine if they have sought and received evaluation by a health care provider. If there is no evaluation, a written and verbal recommendation should be made and a copy retained with screening records.

CONCLUSION

The problems of translating scientific knowledge into improved diabetes care and outcomes are formidable but can be solved with health care providers and community members working collaboratively to address this challenge. The current community programs are intended to support these efforts. Changes in our society's health care policies and its health values and behaviors may also be necessary to address the problems related to diabetes and its complications.[13] Further research into the efficacy and effectiveness of community intervention and screening programs is needed to guide our efforts to improve diabetes care and outcomes. Our preliminary data suggest that broadly-based, risk-factor oriented screening of individuals with diagnosed diabetes may be the preferred method for improving care for people with diabetes. Our responsibility is to integrate research findings related to community programs into the organized health care system and to create and test system interventions that expand beyond the clinic setting into the broader community, financial, and policy arenas. ❐

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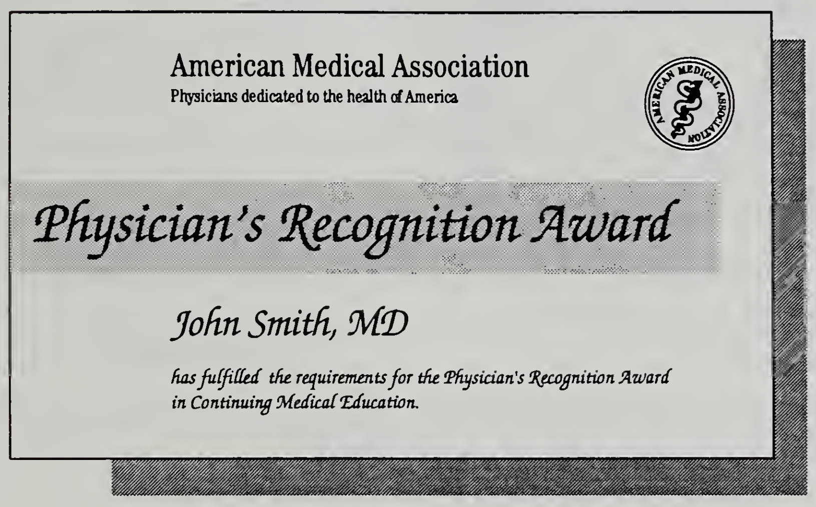

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DIABETES RESEARCH IN SOUTH CAROLINA: PAST, PRESENT, AND FUTURE

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DIABETES RESEARCH IN SOUTH CAROLINA: PAST, PRESENT, AND FUTURE

Due to the concerted efforts of medical investigators, the past 40 years have seen remarkable developments in the care of patients with diabetes.[1] Throughout this period, South Carolina has been at the forefront of both clinical and basic diabetes research. This long and enduring reputation for diabetes research began in 1955 when Dr. John F. Buse joined the Department of Medicine at the Medical University of South Carolina (MUSC) as the first full-time faculty member specializing in Endocrinology/Diabetes. Sponsored by the NIH, he developed the first post-doctoral Training Program in Diabetes/Endocrinology in South Carolina. He was joined in 1956 by his wife, Dr. Maria G. Buse. Her major focus was development of research in diabetes. With the help of talented post-doctoral fellows and students who collaborated with her over the years, she has made numerous contributions, including the following: the first demonstration that maternal insulin crosses the placental barrier, an important finding for the management of pregnancy in diabetics;[2] and the discovery of the importance of muscular work and nervous stimuli in regulating the response of skeletal muscle to insulin,[3] which occurs at a step distal to activation of the insulin receptor.[4,5] She was the first to observe that uncontrolled diabetes impairs insulin receptor signaling and that this defect is reversible by insulin therapy.[6] Her current work focuses on the mechanism of "glucose toxicity," i.e., how sustained hyperglycemia elicits and enhances insulin resistance.[7,8] She is the author of more than 150 papers and her research has been continuously funded by the NIH for over 40 years. In 1971, Dr. John Colwell joined the faculty at MUSC. He has made several significant contributions to our present day understanding of diabetic vascu-

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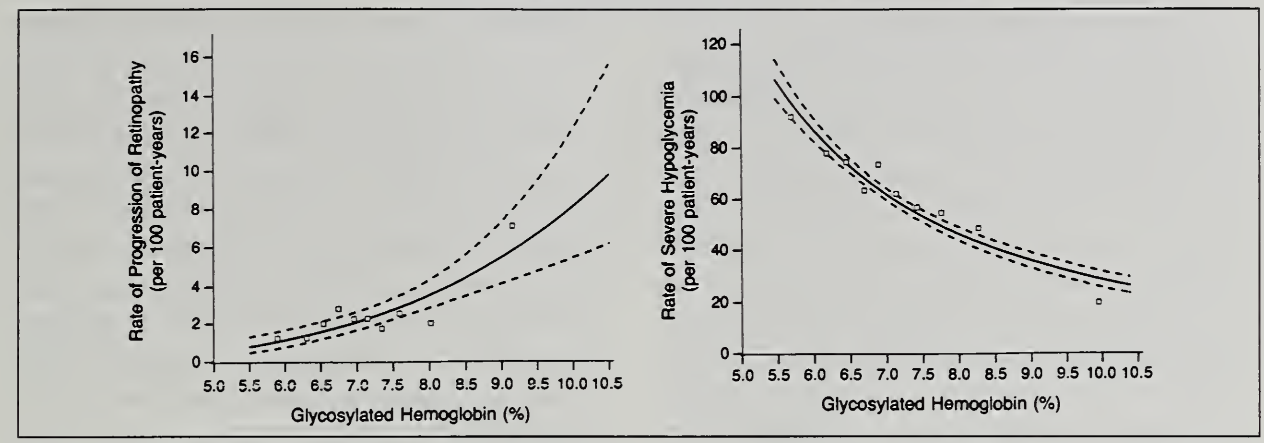

Figure 1. Risk of sustained progression of retinopathy (Panel A) and rate of severe hypoglycemia (Panel B) in the patients receiving intensive therapy, according to their mean glycosylated hemoglobin values during the DCCT.

Source: The DCCT Research Group. N Engl J Med 1993; 329:977-986.

lar disease. Furthermore, Drs. Colwell and Buse have established a tradition for training new investigators who have gone on to make significant contributions in their own right. Medical research in South Carolina has focused on several aspects of diabetes, particularly its long-term complications. This discourse shall attempt to review those significant research developments in which South Carolinians have played a role. Furthermore, we hope to provide an overview of active diabetes projects in the state. Because the orientation of this article is primarily clinical, the many contributions to basic research in diabetes made over the past 40 years by Dr. Maria Buse and her colleagues will not be covered in more detail. A separate article would be needed to enumerate the myriad contributions of this formidable figure in basic laboratory research. Any additional omissions are the responsibility of the authors and are unintentional. The aspects of diabetes research which comprise the focus of this article include: a) prevention and treatment of diabetes and its complications, b) improvements in the lifestyle of people with diabetes, c) advances in the understanding of diabetes complications (retinopathy, nephropathy and cardiovascular disease), and d) pathogenesis and genetics of type 2 diabetes.

PREVENTION OF DIABETES AND ITS COMPLICATIONS

Possibly the most significant development in diabetes research since the discovery of insulin in 1921 is the finding that meticulous blood glucose control can prevent the development of long-term complications. While this concept may appear implicit and previous studies had demonstrated the negative effects of poor diabetes control,[9] as little as 10 years ago, the costs and benefits of intensive insulin therapy for type 1 diabetes were largely unknown.

In the early 1980s, The National Institutes of Health began a controlled, multi-center trial to clarify the relative risks and benefits of intensive diabetes management. As Dr. Colwell was a key planner for this study, the Medical University of South Carolina was one of the 29 medical centers throughout the United States and Canada chosen to conduct the Diabetes Control and Complications Trial (DCCT). The study population was divided into two groups, receiving either conventional or intensive therapy. After just eight years, profound differences in long-term outcome were evident between the groups. The development of retinopathy, nephropathy, and neuropathy were all significantly lower in the intensively managed group (76 percent, 35 percent, 69 percent, respectively).[10] Furthermore, the DCCT showed such a strong correlation between hyperglycemia and complications that any improvement in blood glucose could be expected to be of benefit (Figure 1). In 1992, these findings were heralded as the biggest and best news in the world of modern diabetes research, and they have changed the way practitioners are treating diabetes worldwide. Findings have been supported by a recent study in type 2 diabetes (United Kingdom Prospective Diabetes Study).[11] A similar study is in the planning stage for non-insulin dependent diabetes. This large scale trial is the outgrowth of a successfully completed Feasibility Study.[12] Dr. Colwell in Charleston is among the five investigators selected nationwide to head these projects.

Insulin therapy is also the focus of an ongoing trial in the prevention of type 1 diabetes mellitus. The Diabetes Prevention Trial (DPT), begun in 1994, is designed to identify people at risk for developing type 1 diabetes and to delay or prevent this condition by fooling the immune system into halting the progression of islet cell damage. South Carolinians have access to this innovative therapy, due to the collaborative efforts of pediatric endocrinologists throughout the state. Over 600 people from our state have already been assessed for their risk of developing diabetes through this program. The DPT, if successful, might lead to a large scale screening effort (like those for hypercholesterolemia and hypertension) which would control the rising incidence of type 1 diabetes, the second most common chronic disease in childhood.

Type 1 diabetes has been "cured" in an increasing number of patients from South Carolina through the efforts of the Organ Transplantation Team at the Medical University of South Carolina.[13] Following the lead of investigators in Minnesota and Seattle, this team of physicians has performed over 50 complete and partial pancreas transplants, primarily into patients also undergoing kidney transplantation. Preliminary results are quite promising, with two-thirds of glands producing insulin five years after transplantation. Innovations in immunosuppressive therapy should improve the rejection rate, and perhaps expand the number of candidates for this procedure. This program is growing rapidly, and plans for expansion in the future include isolation and transplantation of just the cells from the islets of Langerhans rather than the entire pancreas. While this approach is much simpler and more expedient, it has not as yet lead to prolonged survival of the graft in the vast majority of cases.[14]

The Diabetes Prevention Program is a clinical trial of metformin or intensive lifestyle modification to reduce the incidence of type 2 diabetes. The Nutrition Coding Center for the trial is located at USC School of Public Health under the direction of Dr. Elizabeth Mayer-Davis.

IMPROVEMENTS IN THE LIFESTYLE OF PEOPLE WITH DIABETES

Several innovations over the past 25 years have resulted in quite profound improvements in the lives of people living with diabetes. For example, the advent of home glucose monitoring has lead to improved self-awareness, and the ability to make frequent and accurate adjustments in insulin dosages. One of the most significant developments in diabetes care in the past 20 years has been the insulin pump. This device was first used in South Carolina by Drs. Hulda Wohltman and Ron Mayfield in the late 1970s. These investigators were the first to demonstrate that the insulin pump was able to reverse the insulin resistance which accompanies poorly controlled type 1 diabetes.[15] As a product of their efforts, the insulin pump became an important part of the intensive management employed by the DCCT.

More recently, two new genetically engineered forms of insulin have been evaluated at MUSC. These "insulin analogs" represent significant advancements in the care of diabetic patients, especially those with type 1 disease. Lispro insulin, a new quick-acting form of insulin, has allowed insulin to be given immediately prior to meals without the usual waiting period of 20-40 minutes.[16] Drs. Ron Mayfield, Kathie Hermayer and others found that the absorption of this insulin analog was similar to that of a typical meal, making it ideally suited to intensive management of type 1 diabetes. A newer analog currently under investigation at MUSC is being touted as a "peakless" insulin. If successfully tested in clinical trials, this new form of insulin would avoid nocturnal hypoglycemia and provide a more consistent basal rate of insulin delivery similar to that of an insulin pump. In modern diabetes care, the various forms of insulin can be combined in several ways to suit the meal pattern of the individual patient. These new forms of insulin give added flexibility to the patient's daily schedule.

Several new therapies for type 2 diabetes are being tested in South Carolina. Dr. W. Timothy Garvey is presently investigating the efficacy and mechanism of action of the first in a revolutionary series of medications to reverse type 2 diabetes. This medication, troglitazone (or Rezulin®) improves insulin sensitivity in skeletal muscle, through unknown mechanism(s). Dr. Garvey's team of investigators will specifically examine the effect of this medication on steroid-induced diabetes. Dr. Kathie Hermayer is also conducting a study on a new class of medications to treat type 2 diabetes. This medication, Voglibose, is a disaccharidase inhibitor which slows the absorption of carbohydrates in the intestine, thus reducing the post-prandial rise in blood glucose.

DIABETIC EYE DISEASE

Diabetes is the leading cause of blindness for people under the age of 60 in the United States. The role of high blood glucose in the development of diabetic retinopathy is unclear. Dr. Timothy Lyons at MUSC, in collaboration with Drs. John Baynes and Suzanne Thorpe at the University of South Carolina, was the first to identify chemical modifications of the cholesterol molecule, which may play a part in the development of this devastating consequence of diabetes.[17]

Assisted by Dr. Lowry King at the Storm Eye Institute, Dr. Lyons is presently attempting to identify differences between people who develop retinopathy and those who do not. The focus of attention in this new study is upon assessment of patients' susceptibility to oxidative stress from the levels of glycoxidation products in red blood cells and skin. If fruitful, these studies promise to yield insight into new treatment modalities for the prevention of blindness.

DIABETIC KIDNEY DISEASE

The effects of diabetes on the kidney are profound and presently account for 45 percent of end stage renal disease requiring dialysis. A number of investigators in South Carolina, most notably Drs. Ron Mayfield, Ayad Jaffa, and Alicia Jenkins, have been concerned with renal manifestations of this disease. These researchers have been probing the contribution of metabolic abnormalities (e.g.; hyperglycemia and hyperlipidemia) to the cellular damage which occurs to the small blood vessels of the kidney. One particular mechanism of interest involves a system of hormones, know as the kinins, which are know to influence several metabolic pathways which participate in diabetic nephropathy.[18] Dr. Jenkins is exploring the hypothesis that altered lipoprotein metabolism, as seen in the diabetic state, may contribute to diabetic kidney disease. By understanding these alterations in metabolic function, these investigators hope to identify new methods for preventing or, at least, slowing the progression toward renal failure.

CARDIOVASCULAR DISEASE

The leading cause of death among patients with diabetes is premature cardiovascular disease. Both cerebrovascular accidents and myocardial infarction occur with increased frequency among patients with both type 1 and type 2 diabetes. While the absolute cause for this phenomenon remains unclear, many of the most significant developments in the area of macrovascular diabetes complications have come from the work of investigators at the Medical University of South Carolina. Abnormalities in HDL cholesterol[19] and their reversal with improved metabolic control[20] were first identified by Drs. Maria Lopes-Virella and John Colwell. Dr. Lopes-Virella has expanded her investigation into the effects of diabetes on cholesterol metabolism, and she was among the first to identify the importance of LDL-containing antigen-antibody complexes to the pathogenesis of atherosclerosis.[21] For many years, Dr. Colwell examined the role of abnormal platelet aggregation in premature cardiovascular disease. In collaboration with Dr. Perry Halushka, he was the first to identify altered prostaglandin metabolism as a key defect in the platelets of diabetic individuals. Dr. Colwell and his team have been leaders in exploring the effects of intensive management on type 2 diabetes. Recognition of his eminence in these areas is apparent from his being selected to author numerous editorials and position statements for the American Diabetes Association and the American Medical Association.[22-25]

THE PATHOGENESIS AND GENETICS OF TYPE 2 DIABETES

Type 2 diabetes mellitus is believed to be at least 10 times more common than type 1 diabetes in South Carolina.[26] Furthermore, this form of diabetes occurs with much greater frequency among family members of affected individuals. This has lead to great enthusiasm in the diabetes community for research into the genetic basis of type 2 diabetes. Over the past 20 years, the identification of genetic mutations responsible for conditions such as Cystic Fibrosis and Gaucher Disease have been important steps toward designing effective therapies for these devastating conditions. The heritability and association of type 2 diabetes with certain ethnic groups strongly suggests that one or a number of genetic mutations are responsible for this condition.

Underlying nearly all forms of type 2 diabetes is a resistance to the glucose lowering effects of insulin. Dr. W. Timothy Garvey at the Medical University of South Carolina is a leader in the field of insulin resistance in type 2 diabetes. He was among the first to identify the importance of the GLUT 4 glucose transporter to insulin resistance and diabetes.[27] He is participating in a genome wide search for genes associated with diabetes and obesity in the Pima Indians[28] and is currently applying the same techniques to the Sea Island population of South Carolina. This program, entitled “Project SuGAR,” will study over 400 families with a preponderance of type 2 diabetes.

The incidence of non-insulin-dependent diabetes in children has been increasing among various ethnic groups in the United States.[29] An unusual form of early-onset diabetes with persistent C-peptide production and negative islet cell antibodies has been reported in African Americans from the Southeast.[30] This atypical form of diabetes mellitus initially presents with signs of insulin deficiency (e.g., ketoacidosis) but evolves into a form of type 2 diabetes. The prevalence of this condition in South Carolina appears to be similar to that of classical type 1 diabetes among the pediatric African American population.[31] A project at MUSC, headed by Dr. Steven Willi, has recently identified the metabolic aberrations responsible for this unique form of diabetes.[32] Further investigation will attempt to uncover the genetic defects responsible for these metabolic effects.

Insulin resistance and physical activity[33] have been studied by Dr. Elizabeth Mayer-Davis at the University of South Carolina School of Public Health. Dr. Mayer-Davis’ work also includes studies of diet in relation to insulin resistance and cardiovascular risk, in particular, macronutrients and vitamin E.

SUMMARY

Medical investigators in South Carolina have been on the “cutting edge” of diabetes research for a number of decades. Despite this fact, our state ranks second in the nation in diabetes prevalence, and diabetes complications are more severe here than anywhere else.[34] It is from the efforts of these investigators that our hope for a brighter future comes. Through a concerted effort toward prevention, improvements in care, and investigation of the pathophysiology of diabetes and its complications, researchers may reduce the substantial burden of diabetes in our state and throughout the world. ❐

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On the Cover

DIABETES

The papyrus Ebers which is estimated to have been produced in 1500 B.C. is considered to be the first medical text. In this document a medical prescription is stated about a means to stop polyuria. This reference is considered the first allusion to diabetes mellitus.

Sandscrit texts indicate that Indian doctors of the 6th century A.D., on testing the urine at pathological cases, found that it tasteth sweet and that it was sticky to the touch. The Indian name for diabetes, *Madhumeha*, means urine of honey. These ancient Indians also knew that the disease is accompanied by thirst, muscular weakness and unpleasant odor.

Ancient medicine gave the general term of "diabetes," which is Ionic Greek meaning "to run through a siphon," to every pathological increase in the amount of urine. Aretaeus of Cappadokia in the 2nd century A.D. was the first to use the term. He thought that a large amount of urine "passes" the kidneys. Aretaeus (A.D. 30-90) describes the disease:

> Diabetes is a wonderful affection, not very frequent among men, being a melting down of the flesh and limbs into urine. The patients never stop making water, but the flow is incessant, as if the opening of aqueducts. Life is short, disgusting and painful; thirst unquenchable; excessive drinking, which, however, is disproportionate to the large quantity of urine, for more urine is passed; and one cannot stop then either from drinking nor making water. Or is for a time they abstain from drinking, their mouth becomes parched and their body dry; the viscera seems as if scorched up; they are affected with nausea, restlessness and a burning thirst; and at no distant term they expire. The cause of it my be, that someone of the acute diseases may have left some malignity lurking in the past. It is not improbable, also, that something pernicious, derived from the other diseases which attack the bladder and kidneys, may sometimes prove the cause of this affection.

In 1674 Thomas Willis (1621-1675) wrote in his "Pharmaceutice Rationals" that the urine of diabetics is sweet as if it contained sugar or honey. This remark distinguished diabetes mellitus from diabetes insipidus, which presents no glycosuria. Although this observation was not new as noted above with the Indians in Sanscrit texts, Willis' close, careful, clinical observation made the best qualitative examination of the urine that was possible for his time and led to a new era in research on diabetes.[1,2]

Pictured on the cover this month is the title page of the thesis of D.C. Mebane, one of five theses on the subject of diabetes from the collection of theses of graduates of the Medical College of the State of South Carolina from 1825 to 1860 which can be found in the Waring Historical Library. Mr. Mebane's thesis was approved by Eli Geddings, M.D., who was the first graduate of the school in 1825. He joined the faculty after his graduation.

Jane McCutchen Brown, Curator
Waring Historical Library

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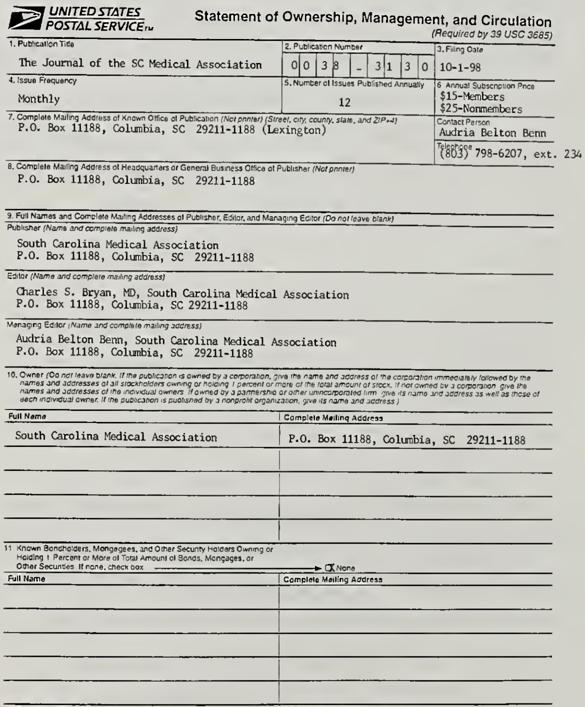

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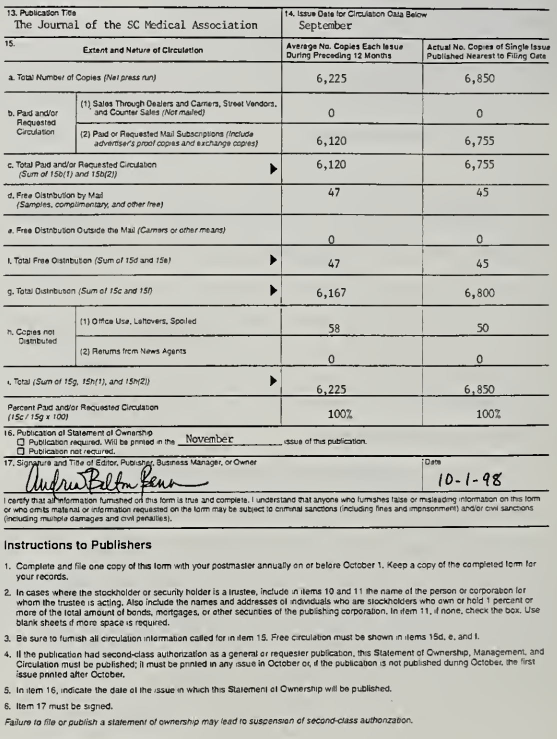

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Do you own tax-deferred annuities that you will not spend during your lifetime? Tax deferred annuities are not the best asset to own at death because they are subject to both estate and income taxes. The after-tax amount that your beneficiaries receive will be substantially diminished by these taxes.

The full value of the annuity will be included in your gross estate for estate tax purposes. Any gain in the annuity will be subject to income tax because annuity cash values do not get a stepped-up basis at death. The result is that your heirs may receive only $.35 to $.40 for each annuity dollar because the balance will go to taxes.

Here's an example:

DESCRIPTION	AMOUNT	%
Value of Annuity	$500,000	100%
Estate Tax	$245,000	49%
Income Tax	$54,250	11%
Received by Heirs	$200,750	40%

The above example shows the taxes attributable to an annuity for a physician whose home, insurance, qualified plans, and other assets total $2,000,000. Her tax deferred annuity, for which she invested $100,000, is worth $500,000 at her death. She does not have a surviving spouse so her children are the beneficiaries of her annuity. Her children are in the 35% income tax bracket.

This physician did not need her annuity for retirement benefits because her retirement plan provided adequate income. With proper planning, she could have taken steps that would have resulted in far more money passing to her heirs with no loss of income or security to her.

If you and your spouse own deferred annuities that you never intend to spend during your lifetimes and would like this benefit to go to your heirs rather than to taxes, return this form for additional information.

Carolina Physicians Advisory Service
PO Box 688
Columbia SC 29202-0688

Name ______________________________

Street ______________________________

City ______________ State ________ Zip ______

Telephone______________________________

Tax Confiscation of Deferred Annuities

Views expressed herein are those of the authors and in no way represent SCMA. We do not give tax advice. Only your attorney and accountant are qualified to do so.

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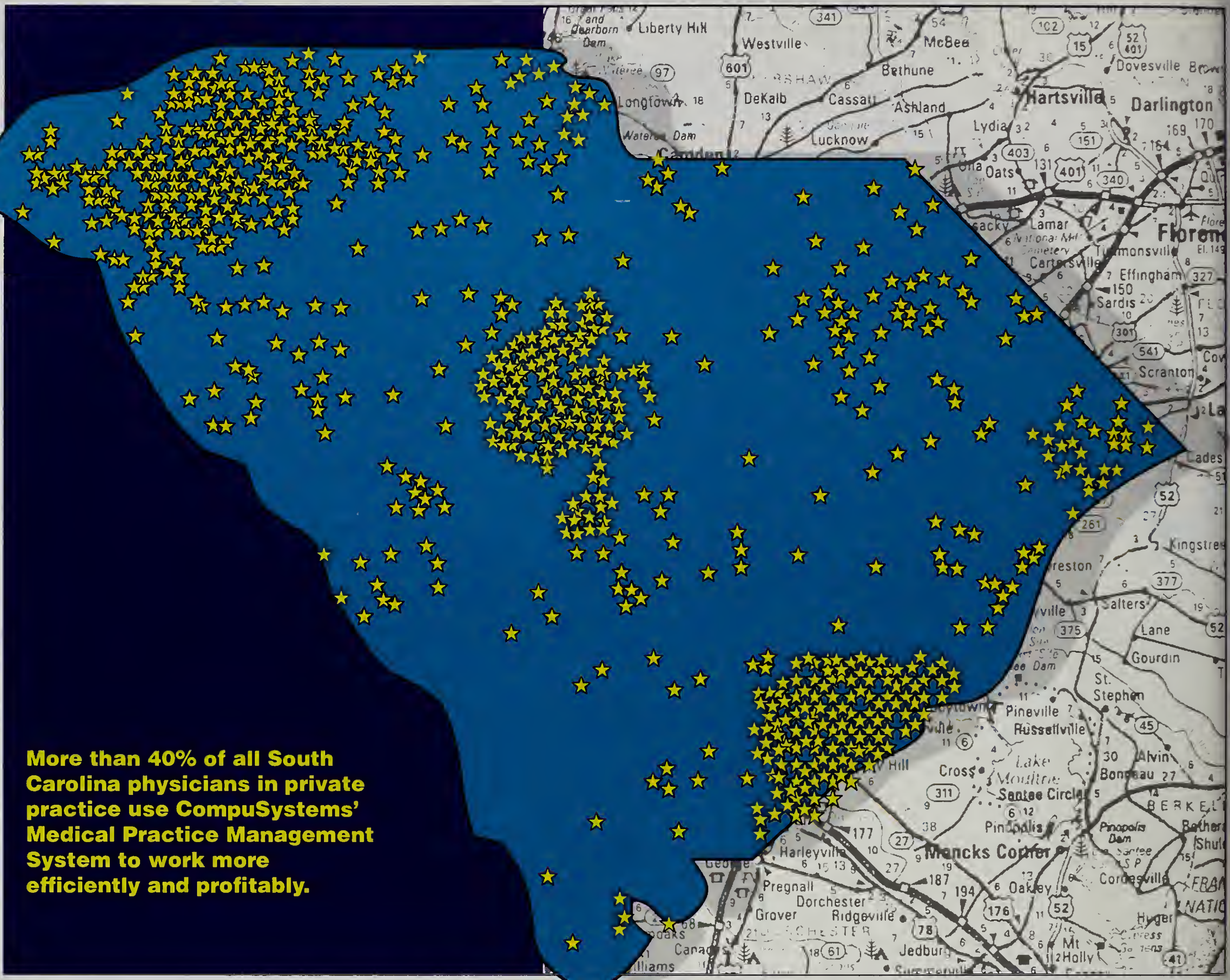
More than 40% of all South Carolina physicians in private practice use CompuSystems' Medical Practice Management System to work more efficiently and profitably.

What can a map tell you about a computer system?

Plenty — if, like this one, it shows how many medical offices in South Carolina use a particular practice management system to run more efficiently, effectively, and profitably.

For example, it might show how a 16-year commitment to "Working for Physicians" has resulted in over 660 installations in South Carolina, representing some 1,930 physicians — over 40% of the 4,600 in private practice in the state!

It might bring home how features like "on-the-fly" refiling, encounter-form tracking, and direct transmission to South Carolina Medicare, Medicaid, and Blue Cross/Blue Shield (with no per-claim charges) are improving physicians' revenue.

It could clarify how critical "one-call" support can be in helping offices stay productive — how telephone support staff, software and hardware engineers, technicians, trainers, and a fleet of service vans can provide support unmatched in the industry.

It might demonstrate how technical expertise brings a host of innovations, starting with the first integrated, direct electronic claims capability in a practice management system.

Or it could validate the concept of regional focus: By selling systems only in the Southeast, a computer company can keep customers up to date on the latest insurance filing requirements.

It could emphasize the flexibility of multi-user, multi-tasking software that runs on the most popular operating system in the world.

And it could illustrate the value of having a computer vendor with a vision for the future and the expertise to make that vision work for you.

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The Journal

OF THE SOUTH CAROLINA MEDICAL ASSOCIATION

VOLUME 94
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DECEMBER 1998
PAGES 517-564

SPECIAL ISSUE: OTOLARYNGOLOGY—HEAD AND NECK SURGERY UPDATE FOR PRIMARY CARE PHYSICIANS

GUEST EDITORS: J. DAVID OSGUTHORPE, M. D., J. CAPERS HIOTT, M. D.

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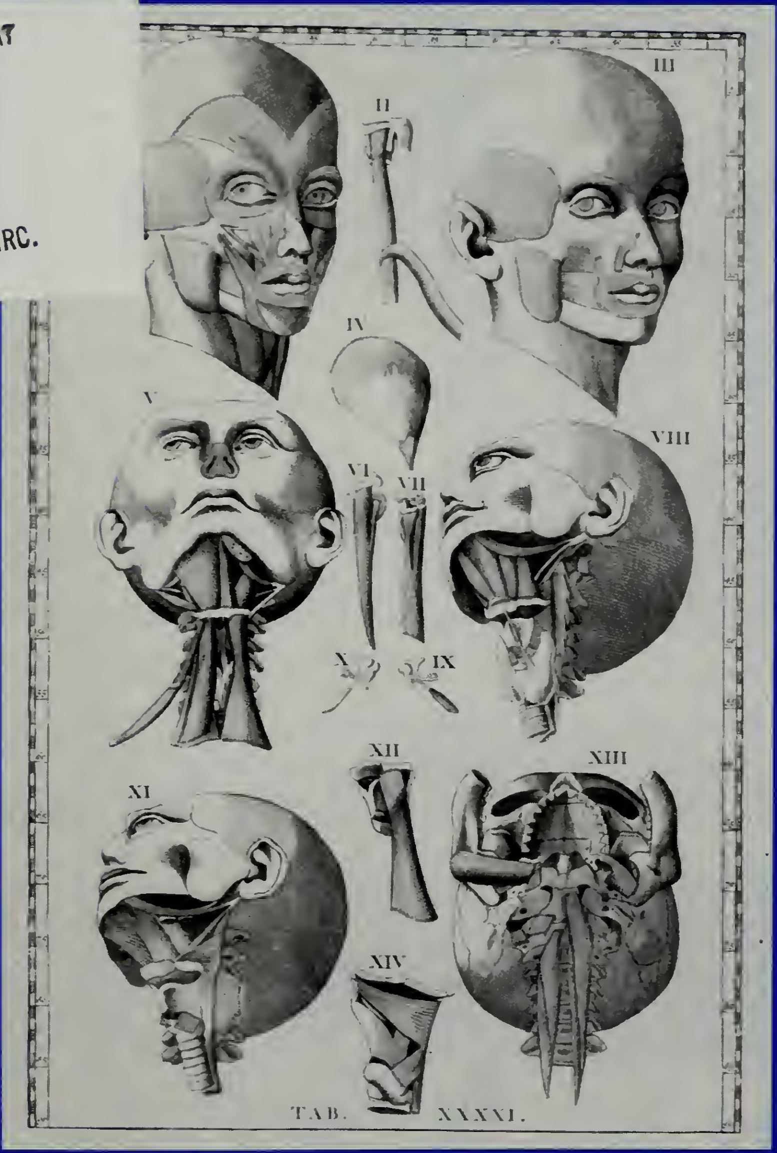

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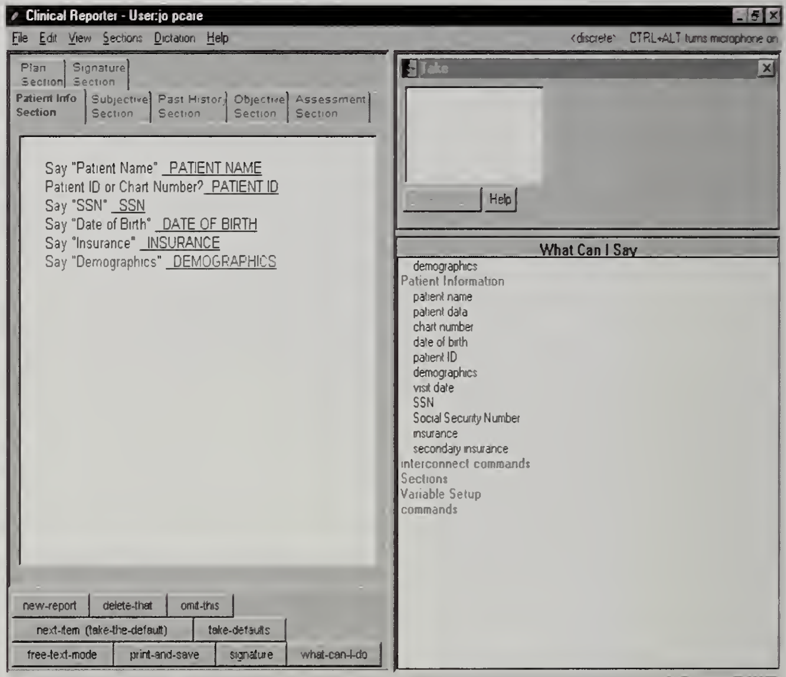

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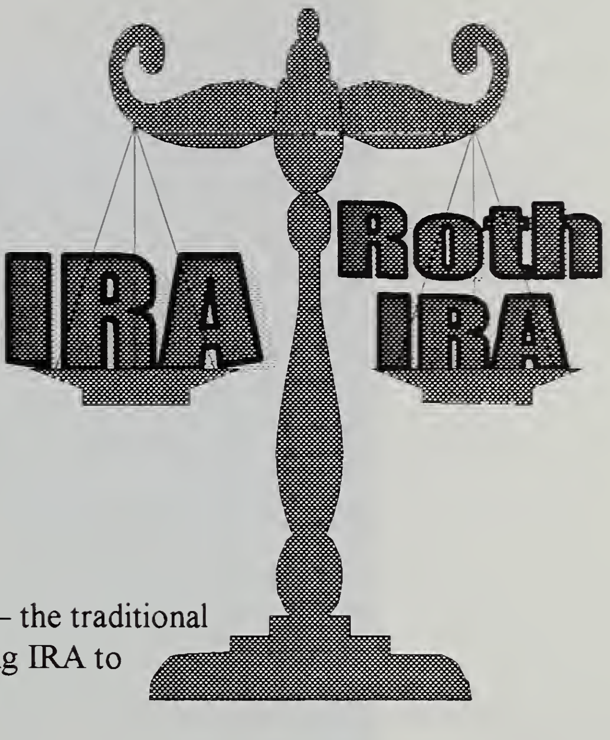

Everyone is talking about which IRA is best – the traditional IRA or a Roth IRA. Should you convert your existing IRA to a Roth IRA?

That seems to be the hottest topic of discussion these days amongst those with significant balances in their IRA. If you keep your money in the traditional IRA, you may soon be required to take minimum distributions that are fully taxable. At your death, the total account may be subject to both income and estate taxes.

On the other hand, you can elect to transfer your traditional IRA to a Roth IRA. You pay taxes now on the full transfer amount, but it continues to grow tax free and subsequent distributions for retirement or death will not be subject to income tax.

So which one is better? Well, if you said you don't know, you're right. Nobody does. That's because we don't know what future tax rates will be or when you will die. So there's no way of knowing whether it makes sense to defer the taxes now or transfer the money at today's tax rate and avoid the tax later.

What if there was a third choice? One where you could transfer the money from your traditional IRA to the new account with no current income tax consequence, it would continue to grow tax free, any future withdrawals would be tax free and the remaining balance would pass income and estate tax free to the next generation!

Sound incredible? Well it's true. And it's available today, with an extremely minimal and manageable downside risk. So why hasn't your financial advisor told you about this alternative approach? Probably because he doesn't know. Maybe it's time you talk with someone who does.

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President's Page

HAPPY HOLIDAYS

Once more, we come up against a year's end.

And, an important and busy year it has been. This was the year of SCMA's 150th anniversary, and the association is more than ready for the next 150 years. Our membership is growing (a rare phenomenon across the country) and it is young, active, and vital—over 60% of our members are under the age of 50. The composition of the SCMA Board has changed over the last four years and the board is smart and informed. Soon, the SCMA will be hiring a new Chief Operating Officer to assist our CEO, Bill Mahon in managing the continued growth of the subsidiaries. This will allow for better functioning of the "traditional" volunteer oriented SCMA.

Thus, we face with confidence a future that shows signs of changes in many areas. Changes are set to be implemented, both on the state and federal level, that will alter the climate of managed care to benefit both physicians and their patients. On the national level, large payors are listening to the concerns of physicians and agreeing to come to the table to resolve issues. South Carolina is bracing for changes of its own as a new governor takes office and cabinet members are replaced. The SCMA is prepared for the changes and South Carolina's physicians are better organized than ever before—we are READY for ACTION!

Take time to enjoy the holidays carefully and wisely. If you are traveling this season, please be safe.

And then only one more year until the year 2000. Hard to believe!

Next year.

Stephen A. Imbeau, M. D.
President

The Journal OF THE SOUTH CAROLINA MEDICAL ASSOCIATION™

Volume 94
December 1998
Number 12

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December 1998

MEDICARE UPDATE

Service, Education and Appeals

Palmetto Government Benefits Administrators, LLC (Palmetto GBA, LLC) is responsible for ensuring service is provided to you, their customers. Their customer service efforts are listed below.

Automated Response Unit

The Automated Response Unit (ARU) is the system that greets you when you call in to the Customer Service Center. General information such as claims status, duplicate remittances, beneficiary entitlement, and remaining deductible can be accessed through the ARU, along with an automated bulletin board with the latest Medicare changes. The ARU is available Monday through Friday from 7:30 a.m. until 10:00 p.m., with limited Saturday hours depending on system availability. They are currently testing a new ARU system, which should be implemented in the next few months.

Customer Service for Beneficiaries

This customer service component handles written and telephone inquiries from your Medicare patients. Per the Health Care Financing Administration (HCFA), the customer service representatives are bound to uphold the Privacy Act. Therefore, they can not divulge information to anyone other than the beneficiary or his/her representative payee, without their permission. In order to contact the Beneficiary Service Center, a patient should call 1-800-868-2522, or in Columbia, 788-3882.

Customer Service for Physicians and Practitioners

This customer service component handles inquiries from Medicare health care providers. It is composed of four teams, which are grouped by related provider specialties, including Primary Care, Surgery, Non-Surgery, and Focused Coverage. The Customer Service Center is available from 9:00 a.m. until 4:00 p.m. on Monday through Thursday and 9:00 a.m. until 3:00 p.m. on Fridays. You may contact them at (803) 788-5568.

Education

The Education department is primarily responsible for developing and presenting educational programs, workshops and visits. They also answer questions about Medicare billing guidelines and coverage issues that would require research above and beyond what could quickly be provided by the Customer Service Center. Education consultants are available to come to your office to discuss specific claim problems or to provide information to your staff if this information can not be readily provided to you via telephone or through written educational materials. If you would like an educational consultant to speak at a specialty society meeting or provide a workshop, please call your consultant or send your request in writing to the following address:

Medicare Part B Education Staff, AK-185
Palmetto Government Benefits Administrators, LLC, LLC
P.O. Box 100190
Columbia, SC 29202-3190

Appeals

The Appeals department is responsible for handling telephone and written appeals. You may request an appeal if you feel that the claim was not processed in accordance with Medicare guidelines or you have additional documentation supporting the medical need that you did not submit with the original claim. Based on the complexity of the situation and number of claims you wish reviewed, you must decide whether a telephone or written review is best for providing a timely response. If the situation involves a small number of claims and no additional documentation is needed, TeleAppeals is the speediest and most effective way to make your request. The TeleAppeals line is available Monday through Thursday from 9:00 a.m. until Noon and 1:00 p.m. until 3:00 p.m. and on Fridays from 9:00

continued, page 4

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Recently, SCMA joined with Merritel Communications Group, a young aggressive brokerage company in the telecommunications industry, to offer its members lower residential phone rates. As a subscriber, you will receive access to long distance rates of 7.5 cents per minute out-of-state and 10.3 cents per minute instate, 24 hours a day, seven days a week, with Premiercom. Just fill out the application on this page and take advantage of these savings today!

SCMA WORKSHOPS

BASIC CPT CODING
January 20, 1999

CPT (Current Procedural Terminology) coding is the basis for all payments in a physician's practice. By attending this course, you will become familiar with the types of services represented by this coding system. You will learn how to select codes for your practice, as well as the rules and conventions that guide the use of CPT codes. Register by January 11, 1999.

9:00 a.m. - 4:00 p.m.; Registration: 8:30 a.m.
Columbia, Clarion Town House Hotel

BASIC ICD-9 CODING
January 21, 1999

ICD-9-CM (International Classification of Diseases, Clinical Modification) is the standard mechanism for recording the reason for the performance of medical services for physicians and hospitals. Payment from carriers depends on the accurate representation of "medical necessity" through diagnosis coding. This class will cover the ICD-9 coding system and how it is used in physician offices. Register by January 11, 1999.

9:00 a.m. - 4:00 p.m.; Registration: 8:30 a.m.
Columbia, Clarion Town House Hotel

Space in each program is limited, so be sure to register early. If you have any questions, please contact Melissa Hamby, ext. 253, at 798-6207 in Columbia, or at (800) 327-1021 statewide, or by e-mail at melissa@scmanet.org.

MEDICAID UPDATE

Early and Periodic Screening Diagnosis and Treatment (EPSDT) Program Changes

In response to requests from physicians and other EPSDT providers, the Department of Health and Human Services (DHHS) is implementing the following changes in the EPSDT program, effective with dates of service on or after December 1, 1998. **A MEDICAID BULLETIN is forthcoming to provide detailed information regarding these changes.**

Providers will be able to bill EPSDT services and immunizations on the HCFA-1500 form using CPT codes. Providers who are set up for electronic billing may bill using the electronic billing system when using these CPT codes. Providers using the HCFA-1500 will bill under the Medicaid provider numbers they currently use for billing the HCFA-1500. Use of the 1724 form for billing purposes may continue through June 30, 1999, however, it is no longer required. Additionally, providers can now assume the responsibility for handling their own EPSDT scheduling for patients in their practice.

The DSS county offices will continue to be available to schedule transportation services and assist with referrals to other professionals for services. In addition, DHHS plans to convene a group of medical professionals to review the current EPSDT required services and periodically schedule and make recommendations concerning the minimum content of screenings and acceptable date ranges for completion of EPSDT screenings. If you wish to participate or provide recommendations to this group, please contact Alicia Jacobs at DHHS at (803) 253-6134.

If you have a desire to begin providing EPSDT services, or need assistance on how to bill using the HCFA-1500, please contact your program manager at (803) 253-6134.

PHYSICIANS CARE NETWORK UPDATE

PCN continues to grow. Currently, there are 6,836 participating physicians, 713 participating ancillary providers and 87 participating hospitals. PCN has 105 contracted groups with 53,536 covered lives. Information will be provided as contracts are received.

NEW GROUPS:

- The Episcopal Diocese of Upper SC; Columbia; effective 10/1/98; Access/Peer Review.
- Four Seasons Screen Printers; Conway; effective 9/1/98; Access/Utilization Review.
- Stone Electric Corporation; Johnsonville; effective 9/1/98; Access/Utilization Review.
- Carolina Machinery/Winner's World; Myrtle Beach; 10/1/98; Access/Utilization Review.
- MAU, Inc.; Augusta, GA; effective 9/1/98; Access/Peer Review.
- Senior Resources; Columbia; effective 6/1/98; Access/Peer Review.
- Beaufort Jasper Comprehensive Health Services; Ridgeland; effective 9/1/98; Access/Peer Review.
- New England Financial; Statewide; effective 10/1/98; Access/Peer Review.

TERMINATIONS:

- Perception, Inc. terminated 11/1/98.

Effective immediately, MRIs no longer require prior plan approval. Please make this change in your provider manual.

If you have questions about PCN, please contact Cindy Osborn, Network Coordinator, PCN at (803) 798-6207, extension 257 or statewide at (800) 327-1021. You can also send an e-mail message to cindy@scmanet.org.

MARK YOUR CALENDAR

The SCMA's Annual Meeting and Scientific Assembly is scheduled for April 29-May 2, 1999, at Charleston Place Hotel, Charleston, South Carolina.

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As an extra bonus, SCMA members who attend the presentation will receive a copy of *Financial Prescriptions for Doctors: 10 Ways to Improve Your Economic Outlook in 1999.* This guide gives specific advice for increasing wealth and running a more profitable practice.

Achieving Economic Freedom for Doctors is being held at the following locations:

Columbia, SC
February 10, 1999
Adams Mark Hotel
1200 Hampton Street

Greenville, SC
February 9, 1999
Hilton Greenville & Towers
45 West Orchard Park Drive

continued from pg. 1

a.m. until 2:00 p.m. The number is (803) 788-0222 ext. 31504. However, if the situation involves a large number of claims or requires additional documentation to be submitted, a written appeal may be required. Written appeals are completed in no more than 45 days and may be submitted to the following address:

Medicare Part B Appeals, AK-180
Palmetto Government Benefits
Administrators, LLC, LLC
P.O. Box 100190
Columbia, SC 29020-3190

Appeals and TeleAppeals Reminder
Keep in mind that you cannot request appeals or TeleAppeals on return/rejects (CO16's on the Remittance Advice). If a claim is returned/rejected, you must submit a new claim. For more information about return/rejected claims, please see Page 2 of the August 1998 *Medicare Advisory.*

PROTECT YOUR BUSINESS

It seems that every day there is a story in the news about employers being sued. You can do everything right and still be sued. Sexual harassment, wrongful termination, discrimination in hiring, firing, promotion, and compensation—all are avenues for potential litigation.

In 1973, the Equal Opportunity Commission reported a total of only 1,787 employment practice complaints. In 1996, the number had climbed to 141,828. There have been 1.3 million complaints in the past ten years.

Companies of all sizes are vulnerable. Mismanagement, unfair business practices, discrimination, and sexual harassment lawsuits can wreak havoc on a business' bottom line. Even worse, frivolous claims must be defended, often at considerable expense.

More than 12 million American businesses have a gap in their business liability insurance protection. Hence, the need for more comprehensive business insurance protection. SCMA Financial Services, Inc., in conjunction with The Hartford, is pleased to offer an insurance program to help combat the high cost of litigation.

The **Employment Practices Liability Insurance (EPLI)** policy covers wrongful employment practices directed against any employee, former employee, or employment applicant. Examples of this are wrongful demotion, termination, harassment, or reassignment. This policy also covers against an individual being sued solely by reason of his or her status as a partner, director, officer, principal, or employee of the insured. This policy will provide complete defense of all claims regardless of legitimacy and will pay on behalf of the policyholder.

For more information on the EPLI policy, please call Michael Lederer at (803) 798-6207, ext. 240 in Columbia, or toll-free at (800) 327-1021.

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VOLUME 94 DECEMBER 1998 NUMBER 12

SPECIAL ISSUE: OTOLARYNGOLOGY— HEAD AND NECK SURGERY UPDATE FOR PRIMARY CARE PHYSICIANS

INTRODUCTION

J. DAVID OSGUTHORPE, M. D.*
J. CAPERS HIOTT, M. D.

Otolaryngology—head and neck surgery is a broad specialty that encompasses illnesses responsible for approximately 60 percent of office visits to primary care physicians. Rhinitis, sinusitis, "colds", pharyngitis/tonsillitis, otitis media or externa and hoarseness constitute the majority. In most medical schools and primary care training programs, students and residents either have a mandatory rotation with the "ENT Docs", or make such one of the most popular electives.

Leading this issue is an article by Peter Weber, M.D., on evaluating the patient with dizziness or vertigo, an increasingly common occurrence in our aging population and within which the primary care physician must differentiate the manifestations of postural hypotension from acoustic neuromas and the like. Jacquelyn Going, M.D., presents a primer on otitis media, an affliction that a preponderance of the pediatric population experiences at one time or another. Greg Parsons, M.D., details the management of rhinitis, particularly relevant to South Carolina where we have high mold spore counts and particularly strong spring and fall pollen seasons. I offer recently developed definitions and treatment parameters for sinusitis. Daniel Rosner, M.D., provides a brief overview of the evaluation of snoring and obstructive sleep apnea, and then the numerous surgical options available so that you can not only advise your patients but sort through all the "hype" generated in the lay press. J. Capers Hiott, M.D., details an approach to the hoarse patient, ranging from the sequella of an upper respiratory infection to an early laryngeal carcinoma. Mark Emery, M.D., and colleagues provide an age and physical examination sensitive algorithm for arriving at the diagnosis on a patient who presents with a mass in the neck. Finally, Louis Costa, M.D., brings you up-to date on various options in facial cosmetic surgery that augment the basic techniques of rhinoplasty, blepharoplasty, and face lift.

The South Carolina Society of Otolaryngology-Head and Neck Surgery sincerely hopes that this issue will benefit you and your patients. We would like to thank GlaxoWellcome for the unrestricted educational grant that supported this issue of *The Journal*. If you have questions regarding the diseases discussed herein, please give your "friendly local ENT Doc" a call.

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VERTIGO: STRATEGIES FOR EVALUATING/ TREATING THE PATIENT WITH DIZZINESS OR VERTIGO

PETER C. WEBER, M. D., F. A. C. S.*

INTRODUCTION

Classically, vertigo can be described as emanating from five different sites (Table 1). Dizziness that we classify as being vestibular in nature may be peripheral, central, or metabolic in origin with a direct effect on the vestibular system (Table 2). Although we cannot possibly discuss in great detail all of the differential diagnoses, benign paroxysmal positional vertigo (BPPV), Meniere's disease, and labyrinthitis, are three of the most common etiologies associated with vertigo. Understanding these three conditions and how to successfully treat these conditions, will enable the practioner to effectively manage most vertiginous patients.

MENIERE'S DISEASE

Meniere's disease, a diagnosis of exclusion, is characterized by episodic spells of vertigo (usually lasting a few hours) associated with unilateral aural fullness, tinnitus, and hearing loss during the vertigo. Over the course of time, usually years, the hearing loss and tinnitus may become permanent. The hearing loss typically diminishes in the lower frequencies first, with the higher frequencies being affected later in the course of the disease. Over time, disequilibrium from a unilateral vestibular weakness may become evident as well as a constant aural fullness. Unfortunately, patient's do not usually present with "classic" Meniere's disease. The patient may present with an atypical Meniere's disease such as vestibular (episodic vertigo spells with or without fullness, tinnitus or hearing loss), or cochlear (a combination of fluctuating hearing loss, tinnitus, and/or fullness with no vestibular component) variety.[2]

Evaluation of a patient who presents with what may be Meniere's disease starts with an audiogram, which is usually normal. Classically, the abnormal audiogram demonstrates low frequency hearing loss. Magnetic resonance imaging (MRI) is essential in order to evaluate for any type of central vestibular cause.[1] A full metabolic workup, specifically to look at autoimmune type disorders, diabetes, hyper or hypothyroidism, syphilis, anemia, or leukemia is obtained. Specific evaluation of the vestibular system, with electronystagmography (ENG) and posturography are useful, even though in Meniere's disease the most common finding is a normal ENG.

Meniere's disease is most commonly found *de novo*, (without any antecedent cause) however, it should be noted that trauma to the temporal bone, surgery to the ear, barotrauma, or post-viral infections may precipitate Meniere's disease as well.[3]

The treatment for Meniere's disease is rooted back to the 1950's, when the pathophysiology of Meniere's disease was thought to be a build up of excess fluid within the inner ear system.[4] This pathophysiology has not changed and has led to the thought that decreasing the amount of fluid within the inner ear system will help prevent Meniere's attacks. Thus, the first line of treatment is usually diet control. We try to eliminate as much salt from the diet as possible, usually keeping people under 1800-2000 mg of NaCl per

Table I. Origins of Vertigo

- **-Vestibular**
- **-Neurologic**
- **-Cardiovascular**
- **-Metabolic/Medication**
- **-Psychiatric**

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Table II. Differential Diagnoses Of Meniere's Disease

Central
- Acoustic neuroma
- Multiple sclerosis
- Vascular loop compression syndrome
- Aneurysm
- Vascular insufficiency
- Arnold-Chiari malformation
- Cerebellar or brainstem tumors
- Cervical vertigo
- Transient ischemic attacks/ cerebrovascular accidents

Peripheral
- Benign paroxysmal positional vertigo
- Labyrinthitis
- Autoimmune inner ear disease
- Perilymphatic fistula
- Otosclerosis
- Migraine induced vertigo

Metabolic
- Diabetes
- Hyper/hypothyroidism
- Syphilis
- Cogan's syndrome
- Anemia
- Autoimmune disorders

day.[5] We also advise them to limit or eliminate their caffeine, alcohol and chocolate intake. If this therapy proves unsuccessful, or in addition to dietary management, we start with diuretic therapy, usually a potassium sparing type diuretic such as a combination of hydrochlorothiazide and triampterene.[6] If these measures prove unsuccessful, then other medications can be used. Calcium channel blockers are probably the next most common medication that is prescribed, with Nomodapine® being the most effective. However, because of the significant cost of Nomodapine®, it is not used very often and Norvasc® is probably used more commonly.[7] Other medications that are sometimes used include ACE inhibitors, vasodilators such as a histamine, and lipoflavins.[3] Meniere's disease is sometimes triggered by allergic reactions and at times, antihistamines are successful in treatment. Finally, Meniere's attacks may also be induced by some type of autoimmune system problem and steroids have been shown to occasionally be effective in patients that are having very frequent episodes.

Unfortunately, although we can control the vertiginous spells, 60-65 percent of the time with medication and diet control, the hearing loss seems to be progressive in nature and we do not do well in preventing hearing loss in Meniere's disease.[8] When medical therapy does not work to control the Meniere's attacks, we can try surgical therapy. This can be in the form of an endolymphatic sac decompression, vestibular nerve section, labryinthectomy or a chemical labyrinthectomy.

In patient's who are suffering an acute attack, there are many medications that can be used to help relieve or significantly decrease the affects of the vertigo. The most common medications used are vestibular suppressants, such as Benzodiazapenes. Anti-emetics are also popular. These include the anticholinergic, antidopamanergic, and antihistamines (Table III).

BENIGN PAROXYSMAL POSITIONAL VERTIGO

Benign paroxysmal positional vertigo (BPPV) usually is not confused with Meniere's disease, however, it frequently will coexist with Meniere's disease. Whereas Meniere's disease has vertigo spells that last hours with significant nausea/vomiting; BPPV vertiginous spells last only seconds to minutes with minimal, if any, nausea. The spells associated with BPPV are often able to be reproduced in the office with a Hallpike's maneuver. The vertigo/nystagmus response initially seen, does demonstrate fatigability with repeated ma-

Table III. Acute Vertigo Treatment

Vestibular Suppressants	*Antiemetics*
Benzodiazepines	Anticholinergic
Diazepam	Glycopyrrolate
	Antidopaminergic
	Droperidol
	Prochlorperazine
	Antihistamines
	Dimenhydrinate
	Diphenhydramine
	Meclizine
	Promethazine

neuvers and horizontal rotary nystagmus is the predominant eye finding.[9] Thus, BPPV, by definition, occurs with movement; rolling over in bed or turning one's head quickly to one side, whereas Meniere's disease vertigo is not associated with positional movements.

Benign positional vertigo is often overlooked as a diagnosis and patient's may complain of this intermittently for many years before the diagnosis is made. Even after successful treatment of the disease, there is the possibility that it may reoccur. The pathophysiology of BPPV is thought to be particles lodged in the semicircular canals and as one turns or moves, these particles move with the fluid within the vestibular system. Whereas the fluid normally will bend hair cells in order to stimulate the vestibular nerve, the free floating particle, weigh more than the fluid and deflect the hair cells more than normal.[9] This in turn gives false information to the brain on the affected side and causes the dizziness. BPPV may be caused from trauma, infections, or idiopathic conditions.

The treatment of BPPV is usually nonsurgical in nature. Success rates of 95 percent have been reported with the maneuver of Epley or physical therapy exercise programs.[9,10] Although the posterior semicircular canal is often the involved canal, the superior or lateral canal may be involved as well. Even after successful treatment of the disease, there is the possibility that it may re-occur. It should be noted that hearing loss is not associated with BPPV nor is tinnitus or aural fullness.

LABYRINTHITIS

Labyrinthitis differs from Meniere's disease in that, the "bad dizzy spell" is typically a one time event. Although the vertiginous episode may last only a few hours like Meniere's disease, it typically lasts a lot longer, such a whole day to two to three days. Although the patient may regain their ability to ambulate within a couple of days, the lingering after effects, such as disequilibrium, persist much longer (weeks to months). The hallmark of labyrinthitis then is the gradual progress to recovery.[11] In Meniere's disease, once the attack is over, the patient feels much better and is able to resume all normal activity.

Patient's who have suffered labyrinthitis do not typically encounter the recurrent vertiginous spells associated with Meniere's disease. Although hearing loss (usually high frequency) may occur with labyrinthitis, it typically does not. ENG testing may be normal, or may show a reduced or absent response in the affected ear. Therefore, it is important to remember that one cannot make the diagnosis of Meniere's disease after only one episode of vertigo since it is quite possible that this is just a labyrinthitis. Just as in Meniere's, supportive care during the acute episodes with antiemetics, anticholinergic, and/or antihistamines, can be quite helpful and occasionally, intravenous fluids may also be required.

Vestibular rehabilitation therapy is especially helpful after patients have suffered a bout of labyrinthitis in order to help them compensate for the vestibular insult in a more timely fashion.

CONCLUSION

Although many disease entities exist causing vertigo, the three that we discussed today, labyrinthitis, BPPV and Meniere's disease, probably constitute 85 percent of all vestibular related conditions. The diagnosis of these is usually made through history and examination along with radiologic and metabolic testing. Vestibular complaints can often be confusing and when one is not sure of the diagnosis, evaluation by a physician who specializes in these disorders is appropriate. ❐

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PARAMETERS FOR TREATING OTITIS MEDIA

JACQUELYN A. GOING, M. D.*

The National Center for Health Statistics indicates otitis media (OM) accounts for approximately 25 million office visits a year, with children under fifteen years of age accounting for 81 percent of these OM visits.[1] United States OM treatment costs are estimated to be five billion dollars a year.[2] OM is the leading indicator for outpatient antimicrobial use in the United States.[3] When and how to treat OM and the length of treatment with antimicrobials is debated, and has led to many studies and published articles.

The importance of accurate diagnosis of the type of otitis media is stressed. Otoscopy is the most important examination for diagnosis of OM. The tympanic membrane (TM) should be tested for mobility with pneumatic otoscopy and observed for position, color, visibility of landmarks, retraction pockets, tympanosclerosis, and perforation. The presence or absence of middle ear effusion (MEE) should be noted.

The three main pathogens in acute otitis media (AOM) and in AOM with otorrhea post tympanostony tube insertion, are streptococcus pneumonia, hemophilus influenza and moraxella catarrhalis. Up to 50 percent of cultures in otitis media with effusion (OME) may be positive for one of these bacteria. Studies have shown viruses in 10-20 percent of patients with AOM, with 0 percent to 13 percent of these viruses as the single agent. The most common virus found in middle ear effusion (MEE) is RSV followed by rhinoviruses, influenza virus, and adenovirus.[4] Increasing incidence of beta-lactamase producing organisms and penicillin resistant pneumococci are a problem.

The CDC has published the Principles of Judicious Use of Antimicrobial Agents. Their analysis—evidence, favoring antibiotic treatment for AOM, was persuasive.[3] A recent study using tympanocentesis to obtain MEE for both antimicrobial concentrations and pathogen profiles confirms that amoximcillin remains a good first choice for uncomplicated, non-refractory AOM. Use of high-dose amoxicillin (60-80 mg/kg/day) is advocated where penicillin resistant pneumococci is a concern.[5] If significant clinical improvement has not occurred within 72 hours on amoxicillin, a Beta-lactamase producing organism should be suspected and one of the Beta-lactomase stable antimicrobials should be prescribed. The CDC review of the data supported five-seven days therapy in older children with uncomplicated mild AOM. The trials generally excluded patients at high risk for failure, such as those with underlying medical conditions or a history of chronic or recurrent otitis media. The efficacy of short course therapy has not been well evaluated in children with severe or complicated AOM or those less than two years of age; short course therapy is not recommended under these circumstances.[3] Short term therapy in uncomplicated AOM would seem to be supported by studies showing a single dose of ceftriaxone (produces therapeutic middle ear concentration for three-five days) is as effective as a ten-day course of amoxicillin or TMP/SMZ. The use of Ceftriaxone should be considered in instances where there is concern about limited oral intake (vomiting) or compliance; also, consider IM administration, cost, and use of broad spectrum antibiotics in light of increasing antimicrobial resistance.

If the patient continues to be symptomatic (febrile, otalgia, no improvement on otoscopy), consideration can be given to changing the antimircrobial and/or tympanocentesis with or without myringotomy for identification of the organism and pain relief. Tympanocentesis/Myringotomy may also be indicated in patients with AOM who appear unusually ill or septic, have suppurative complications such as facial paralysis, or those who are immunocompromised (chemotherapy, post-transplant, immune deficiency diseases).

Watchful waiting of an asymptomatic patient who has a persistent MEE after treatment of an

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episode of AOM may be sufficient. The Agency for Healthcare Policy and Research (AHCPR) has a guideline entitled "Otitis Media with Effusion in Young Children." There are 74 pages devoted to a very narrow subset of patients, specifically children from one-three years of age with no craniofacial, neurological, or sensory deficits, and who are otherwise healthy, except for asymptomatic OME. The algorithm (figure 1) assumes follow up intervals of six weeks and a confirmed diagnosis of OME. Observation is probably the preferred option until three months of OME, at which time a course of antimicrobial therapy may be tried prior to myringotomy and tubes. A hearing evaluation is recommended at three months as well. A meta-analysis by the AHCPR panel of studies on antibiotics for OME found a 14 percent probability that OME would resolve better with antibiotics vs. no treatment. If the child presents with asymptomatic OME and has not been seen or treated for AOM in the previous two-three months, a course of antibiotics would seem reasonable. Antihistamines, decongestants, and steroids were not recommended for OME, but such use is not prohibited for concomitent indications.

After three months of OME, bilateral myringotomy and tubes becomes an option and is recommended after four-six months. Adenoidectomy is a clinical option for children four years or older with OME and may be considered in younger children with coexistent indications.[1] Adenoidectomy should be considered if symptoms such as snoring, mouth breathing, or chronic purulent rhinosinusitis are present, and if the child has had myringotomy and tubes previously. The effects of recurrent or persistent OM on speech, language, and cognitive development of the child need to be recognized. The AHCPR Panel analyzed a number of studies and concluded that the data support a weak association between OME in early life and abnormal speech and language development and/or attention behavior in children. Earlier and more aggressive treatment may be indicated by special considerations, such as preexisting sensorineural hearing loss or visual or mental deficit, where even a mild added hearing loss can be a substantial detriment. Associated changes of the tympanic membrane such as severe atelectasis or deep retraction pockets may indicate the need for earlier tympanostomy tube placement as well.

Chemoprophylaxis can be considered for the child with recurrent AOM without persistent MEE, defined as three or more separate and documented episodes in the preceding six months, or four or more episodes in twelve months. The CDC article recommends either sulfisoxazole or amoxicillin as the agent of choice. Treatment should be continued for two to six months or until the beginning of summer. Children under two years of age and those in daycare settings are more likely to benefit from prophylaxis.[3] The benefit of prophylaxis must be weighed against the risk of promoting antimicrobial resistance or nasopharyngeal carriage of resistent pneumococci.[3] Myringotomy and tubes has reduced the frequency of recurrent AOM and is a reasonable alternative to prophylaxis.[3] If there are frequent "breakthroughs" of AOM, or if the parents refuse long-term antimicrobial therapy, referral for myringotomy and tubes should be considered.

The many factors influencing the timing of and decision for or against myringotomy and tubes, with or without adenoidectomy, include age, unilateral vs. bilateral effusion, length of effusion, severity of hearing loss, the impact of speech or language delay or behavior problems, the presence or absence of physical changes such as atelectasis or retraction pockets, the presence of pre-existing sensorneural hearing loss, congenital syndromes, visual or mental deficit, snoring, or mouth breathing. ❐

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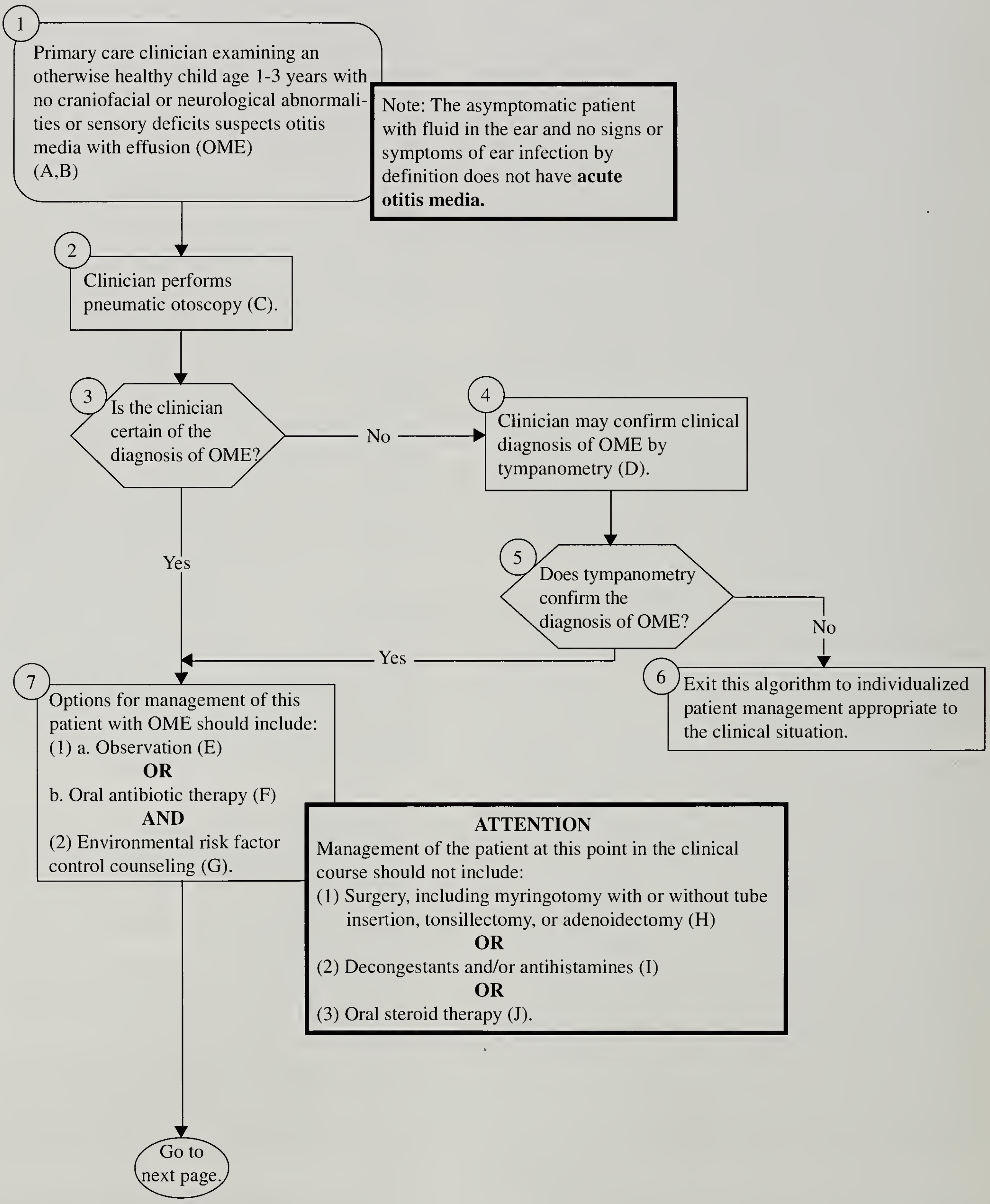
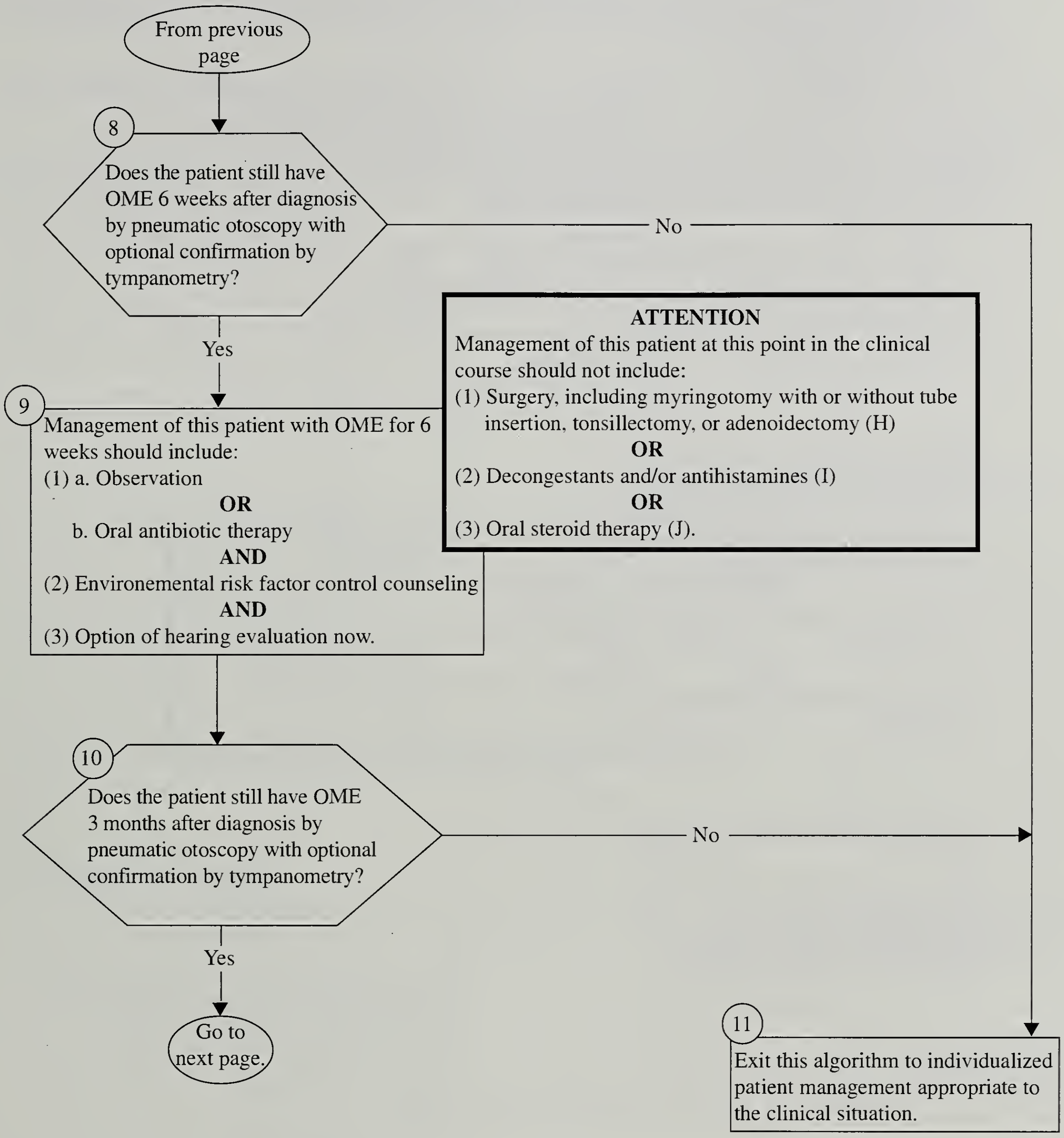
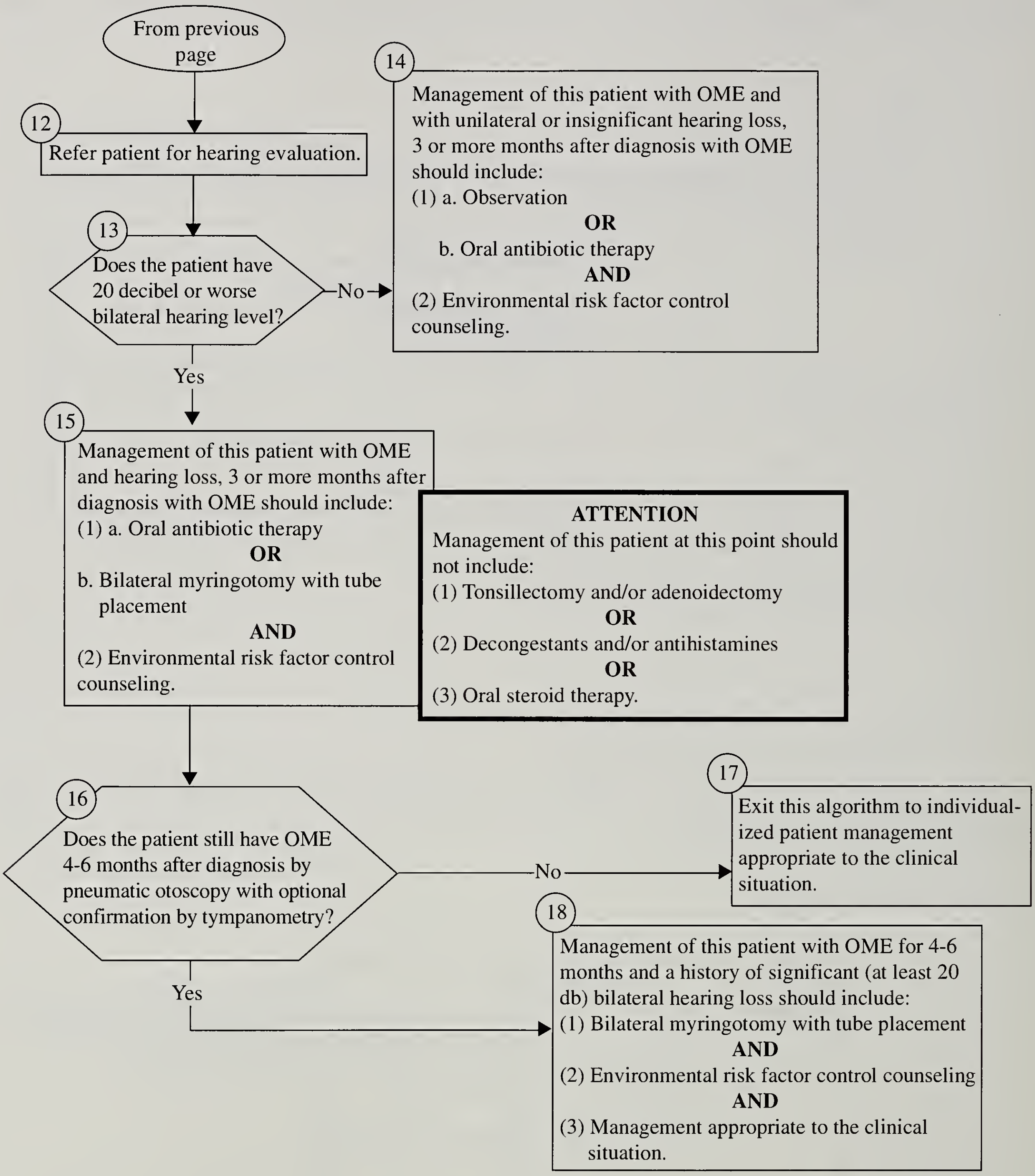
Figure 1. Algorithm for managing otitis media with effusion in an otherwise healthy child age 1 through 3 years[1]


1
Primary care clinician examining an otherwise healthy child age 1-3 years with no craniofacial or neurological abnormalities or sensory deficits suspects otitis media with effusion (OME) (A,B)
Note: The asymptomatic patient with fluid in the ear and no signs or symptoms of ear infection by definition does not have **acute otitis media.**
2
Clinician performs pneumatic otoscopy (C).
3
Is the clinician certain of the diagnosis of OME?
No
4
Clinician may confirm clinical diagnosis of OME by tympanometry (D).
5
Does tympanometry confirm the diagnosis of OME?
No
6
Exit this algorithm to individualized patient management appropriate to the clinical situation.
Yes
Yes
7
Options for management of this patient with OME should include:
(1) a. Observation (E)
OR
b. Oral antibiotic therapy (F)
AND
(2) Environmental risk factor control counseling (G).
ATTENTION
Management of the patient at this point in the clinical course should not include:
(1) Surgery, including myringotomy with or without tube insertion, tonsillectomy, or adenoidectomy (H)
OR
(2) Decongestants and/or antihistamines (I)
OR
(3) Oral steroid therapy (J).
Go to next page.


From previous page
8
Does the patient still have OME 6 weeks after diagnosis by pneumatic otoscopy with optional confirmation by tympanometry?
No
Yes
9
Management of this patient with OME for 6 weeks should include:
(1) a. Observation
OR
b. Oral antibiotic therapy
AND
(2) Environemental risk factor control counseling
AND
(3) Option of hearing evaluation now.
ATTENTION
Management of this patient at this point in the clinical course should not include:
(1) Surgery, including myringotomy with or without tube insertion, tonsillectomy, or adenoidectomy (H)
OR
(2) Decongestants and/or antihistamines (I)
OR
(3) Oral steroid therapy (J).
10
Does the patient still have OME 3 months after diagnosis by pneumatic otoscopy with optional confirmation by tympanometry?
No
Yes
Go to next page.
11
Exit this algorithm to individualized patient management appropriate to the clinical situation.


From previous page
12
Refer patient for hearing evaluation.
13
Does the patient have 20 decibel or worse bilateral hearing level?
No
Yes
14
Management of this patient with OME and with unilateral or insignificant hearing loss, 3 or more months after diagnosis with OME should include:
(1) a. Observation
OR
b. Oral antibiotic therapy
AND
(2) Environmental risk factor control counseling.
15
Management of this patient with OME and hearing loss, 3 or more months after diagnosis with OME should include:
(1) a. Oral antibiotic therapy
OR
b. Bilateral myringotomy with tube placement
AND
(2) Environmental risk factor control counseling.
ATTENTION
Management of this patient at this point should not include:
(1) Tonsillectomy and/or adenoidectomy
OR
(2) Decongestants and/or antihistamines
OR
(3) Oral steroid therapy.
16
Does the patient still have OME 4-6 months after diagnosis by pneumatic otoscopy with optional confirmation by tympanometry?
No
Yes
17
Exit this algorithm to individualized patient management appropriate to the clinical situation.
18
Management of this patient with OME for 4-6 months and a history of significant (at least 20 db) bilateral hearing loss should include:
(1) Bilateral myringotomy with tube placement
AND
(2) Environmental risk factor control counseling
AND
(3) Management appropriate to the clinical situation.

CURRENT THERAPY FOR CHRONIC RHINITIS

GREGORY S. PARSONS, M. D.*

INTRODUCTION

Chronic rhinitis is a common ailment affecting millions of Americans each year. The differential diagnosis is quite extensive. (See Table 1) The majority of patients who have chronic rhinitis are afflicted by allergic rhinitis, where symptoms were present for greater than 31 days per year in 17.7 percent of patients.[1] The associated economic impact of allergic rhinitis alone is estimated at $3.5 billion.[2] There are many indirect costs associated with chronic rhinitis including interference with daily activities (work or school) or concomitant disease. If correlated disease processes such as sinusitis and asthma are considered, the cost estimate would be well over $10 billion.

- I. ALLERGIC RHINITIS
  - A. Seasonal
  - B. Perennial
- II. NON-ALLERGIC RHINITIS
  - A. Infectious
    - 1. Bacterial
    - 2. Viral
    - 3. Fungal
  - B. Structural
    - 1. Congenital (choana atresia)
    - 2. Nasopharyngeal (adenoid hypertrophy)
    - 3. Septal deviation
  - C. Neoplastic
    - 1. Benign (polyps)
    - 2. Malignant
  - D. Foreign bodies
  - E. Metabolic
    - 1. Hypothyroidism
    - 2. Diabetes
    - 3. Pregnancy
  - F. Other
    - 1. Wegener's granulomatosis
    - 2. Sjögren's
    - 3. Sarcoidosis
    - 4. Medications (apirin, beta-blockers, etc.)
    - 5. Non allergic rhinitis with eosinophilia
    - 6. Vasomotor rhinitis
    - 7. Atrophic rhinitis
    - 8. CSF leak
    - 9. Topically applied decongestants (Afrin)

Table I. Differential Diagnosis of Chronic Rhinitis

HISTORY

When the patient presents with rhinitis, a thorough history can often pinpoint the diagnosis. One of the most important factors is determining the type of drainage. If the patient has colored drainage of short duration (less than five days), it is usually a viral infection, whereas if the colored drainage extends beyond seven days, it is often a sinus infection and should be treated with antimicrobial therapy. It is important to ask the patient what medicines are routinely used as many types of drugs can cause rhinitis, including beta-blockers, oral contraceptives, and many anti-hypertensive agents. The diagnosis in a patient with allergic symptoms such as sneezing, rhinorrhea, itchy eyes/palate, or nasal congestion is often simple. Allergy patients are divided into seasonal, specifically having symptoms when various trees, grasses or weeds pollinate; or perennial, for patients who have year-round symptoms which are often due to dust mites or molds. Another important feature in differentiating allergic rhinitis from the other causes is family history, since many patients with allergic problems have a positive family history. Other conditions can cause rhinitis including hormonal changes (hypothyroidism,

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Antihistamine	Trade name	Usual dosage	Monthly cost*
First Generation Antihistamines			
Brompheniramine	Dimetane	4 mg q 4-6 h	14.56 – 21.83
Chlorpheniramine	Chlortrimetron Generic	4 mg q 4-6 h	15.89 – 23.83 1.28 – 1.93
Tripolidine	Actifed	one tab q 4-6 h	25.85 – 38.77
Clemastine	Tavist	1.34 –2.68 mg bid	10.80 – 16.20
Diphenhydramine	Benadryl Generic	25-50 mg q 4-6 h	21.16 – 84.62 2.40 – 3.60
Second Generation Antihistamines			
Cetirizine	Zyrtec	10 mg qd	53.95
Fexofenadine	Allegra	60 mg q 12 h	55.22
Loratidine	Claritin	10 mg qd	64.06

* Estimated cost to the pharmacist based on the average wholesale price.

Table II. Antihistamines

pregnancy and diabetes) and various systemic diseases.

PHYSICAL EXAMINATION

The patient should be examined to rule out structural abnormalities of the nose (septal deviation, benign and malignant tumors), observation for a high, arched palate from chronic mouth breathing, and pharyngeal lymphoid hyperplasia. Unilateral purulent drainage is often a sign of a foreign body. Allergic findings may be readily apparent including conjunctival inflammation; Dennie/Morgan lines, which are extra lines or folds parallel to the lower eyelid margin; and allergic shiners resulting from the engorgement of infraorbital veins and hemosiderin deposits. Patients may present with an allergic salute, which is the result of a maneuver where the tip of the nose is lifted repetitively until a permanent transverse crease is formed in the lower aspect of the nose. Allergy patients may also have a decreased sense of smell from nasal congestion and very pale and edematous mucosa.

OTHER TESTING

Nasal smears are easily performed using Wright's stain or Diffquick, confirming an allergic problem when more than five eosinophils per high-powered field are present. A predominance of PMNs would indicate an infectious etiology. In many patients, it is difficult to separate allergy from low grade chronic sinusitis. In these patients, a limited CT scan can be quickly performed at a cost similar to that of plain radiographs. Definitive findings such as structural abnormalities, including a deviated septum or polyposis or the presence or absence of infection, can allow for rapid clinical intervention.

Immediate hypersensitivity skin testing has been the gold standard of allergy diagnosis for over 50 years. Techniques have now advanced so that not only can the patient's sensitivity to an allergen be determined, but also the quantitative amount of the reaction.[3] Prick tests were first described by Lewis and Grant in 1926 and are often used as an initial screening test. However, there is still significant variability due to the difficulty of precisely reproducing the depth of penetration and the amount of force used to lift the skin. Intradermal tests were developed by Mantoux in 1908. These tests have increased sensitivity due to the ability to inject larger quantities of antigen intradermally and better reproducibility due to the greater accuracy of antigen delivery. Skin end point testing is a variation of intradermal testing, which not only determines the allergens the patient will react to in vivo, but also determines a quantitative amount of allergy present.[3]

In vitro tests are performed on serum, and when performed by a quality lab, are now the equivalent of skin testing. They are divided into two categories, RAST (radioallergosorbent test) and ELISA (enzyme linked immunosorbent). These tests are used by many physicians as an initial test for all patients, but are especially useful in the patient with dermatographism, children under the age of six, and in patients who are on beta-blockers or who have asthma. In the past, there has been considerable concern about the cost of testing using an in vitro technique versus skin testing (in vivo). A recent article in a managed care journal specifically demonstrated that in taking care of the routine allergy patient, there was very little difference between the overall cost of in skin testing versus RAST/ELISA testing.[4]

CLINICAL APPROACH

After the information above is documented, the patients can usually be divided into several general categories. The patient who has a viral etiology for rhinitis can be treated with observation or with antibiotics for a bacterial rhinitis. The patient with recurrent sinusitis or structural abnormalities such as a septal deviation or nasal polyps should be evaluated by an otolaryngologist. In patients with drug induced rhinitis, an attempt should be made to wean them from these medicine(s). The patient who is addicted to over the counter decongestant nasal sprays often requires a multi-pharmaceutical approach including intranasal steroids with oral decongestants. They may require a short course of oral Prednisone in order to be successfully weaned. The patient with systemic disease is often helped with nasal symptomatology by treating that systemic disease. For the patient who does not fit a clearly defined category, a diagnosis of vasomotor rhinitis is made. This should be a diagnosis of exclusion and is usually treated with similar pharmaceutical agents as discussed below. However, a recent addition to our armamentarium is Atrovent nasal spray (ipratropium bromide) which is also helpful in treating this condition.

For the patient with allergic rhinitis, the ideal management is avoidance. This is the simplest and most cost-effective means to deliver care to the patient. However, it is very difficult because patients are often not aware of the specific allergen causing their symptoms. They should be instructed to limit their exposure to animals and to keep windows and doors closed during high pollen season. When they are in the car, air conditioning should be use as an additional filtration device. Dust control, including placing covers over the mattress and pillows, removing objects which collect dust including stuffed animals and carpets, is often helpful. Laundering bedding in water greater than 130°F and installing a high density particulate air filter are additional measures, along with keeping the indoor humidity below 50 percent, which decreases the dust mite count. All allergy patients will be helped by avoiding chemical exposure including cigarette smoke, personal hygiene products such as perfume and cologne and household cleaners.

PHARMACEUTICAL INTERVENTION

For the patient who cannot avoid the antigens to which they are sensitive, or those who are unaware of the causative allergen, there is a wide variety of pharmaceutical agents available, both over the counter and by prescription. (See Table II). All patients can be started on a first generation antihistamine, as the costs are significantly less. If there is no improvement or sedation is a problem, second generation antihistamines should be given, albeit the costs are significantly higher. Each second generation agent works very well for both seasonal and perennial allergies and may be of some help for other etiologic types of chronic rhinitis.

Trade name	Maintenance Dosing	Number of Puffs	Monthly Maintenance Cost*
Flonase (Fluticasone)	2 puffs per nostril q day	120	46.19
Nasacort (Triamcinolone)	2 puffs per nostril q day	100	44.66
Nasarel (Flunisolide)	2 puffs per nostril x bid	200	43.85
Nasonex (Mometasone)	2 puffs per nostril q day	120	48.23
Rhinocort (Budesonide)	2 puffs per nostril q day	200	21.70
Vancenase AQ DS (Beclomethasone)	2 puffs per nostril q day	200	57.88

* Estimated cost to the pharmacist based on the average wholesale price.

Table III. Currently Available Nasal Corticosteroids

Another addition to the armamentarium for allergic rhinitis is inhaled

Table IV. INDICATIONS FOR IMMUNOTHERAPY FOR INHALANT ALLERGY
Pharmacotherapy insufficiently controls symptoms, produces undesirable side effect, or interferes with the patient's lifestyle
Appropriate avoidance measures of indoor allergens are not feasible, do not provide adequate relief of symptoms, or are unacceptable to the patient
There is a patient history of allergic rhinitis for at least two seasons (seasonal) or 6 months per year (perennial)
There are positive skins tests or serum-specific IgE that correlate with rhinitis symptoms

Table IV. Indications for Immunotherapy for Inhalant Allergy

nasal steroid sprays (see Chart III). Many physicians feel that for treatment with asthma, an anti-inflammatory approach should be used as a first line treatment for patients with moderate or severe allergic rhinitis. In many patients, symptomatology may be completely resolved by the use of these medicines alone. Clinically, there is very little difference between products. Patients may have a preference due to the transport vehicle (which may have a scent). There is also the choice between dry and aqueous preparations. Cost can be a very significant factor. All of these medicines may be used at normal dosing without adrenal suppression[5] with Mometosone Furoate Monohydrate having the least systemic absorption. Routine follow up should be performed on all patients, as there may be local reactions, including burning and stinging or headaches. There should be long term follow up because occasionally they can cause unusual complications such as perforation of the septum. Often a sign of impending problems with perforation is continued epistaxis with the use of these products. All patients should be instructed to use the product aiming laterally in the nose as this will decrease this symptom. Patients over the age of 60 should be followed for increased intraocular pressure after three months of use because glaucoma has been associated with the use of these medicines.[6]

IMMUNOTHERAPY

For the patient who has continuing moderate to severe symptoms which are not relieved by avoidance or pharmaceutical intervention, immunotherapy is the method of choice (Table IV). This treatment takes a significant commitment as immunotherapy needs to be administered for a period of three-five years, after which approximately 75 percent of the patients develop a permanent response. Use of SET (skin endpoint titration) or in vitro testing (RAST/ELISA) allow the physician to quantitatively determine the amount of allergy present, thereby allowing higher initial starting doses which in turn results in quicker relief of symptoms. Theoretically this should also allow an end point of treatment to be reached in a more timely fashion.

In summary, chronic rhinitis affects a significant portion of our patient population. Understanding the differential diagnosis and treatment modalities available allows the physician to rapidly relieve the patient's symptoms, thereby alleviating malaise, discomfort and a generalized dissatisfaction with his/her quality of life. ❐

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FINALLY: STANDARDIZED DEFINITIONS AND PRACTICE PARAMETERS FOR RHINOSINUSITIS

J. DAVID OSGUTHORPE, M. D. *

Rhinosinusitis, often simply called sinusitis, is one of the most common complaints leading to a physician office visit in the United States, with a self-reported incidence of approximately 135/1000 of population and accounting for about 12 million physician office visits (National Ambulatory Medical Care Survey) and 45,000 hospitalizations (National Hospital Interview Survey) in 1995.[1,2] In addition to the cost of medications, physician visits, and lost productivity, chronic sinus disease results in health-related quality of life decrements in the domains of general health perception, vitality, and social functioning comparable to serious diseases such as angina and chronic obstructive pulmonary disease.[1,2]

The most common etiology of rhinosinusitis is a viral upper respiratory infection that leads to sinus ostial obstruction and a secondary bacterial overgrowth. Next in frequency is atopy, which is particularly common in the Southeast due to the moderate climate and high humidity. Anatomic obstructions to sinus drainage, such as from a septal deviation, turbinate abnormality, or polyps, follow as causes of rhinosinusitis, after which are many other possibilities ranging from cystic fibrosis to diminished immunocompetence from diabetes mellitus, chemotherapy, HIV, or hereditary factors.[2,3]

In 1996, after a consensus conference of representatives from the national otolaryngology, allergy/immunology, and infectious disease organizations, rhinosinusitis was divided among four classifications based on signs, symptoms, and their temporal courses.[2] These basic parameters have been refined by the American Academy of Otolaryngology-Head and Surgery, which represents over 9,000 ear, nose, and throat physicians, and are summarized in Table 1.[3,4] Patient symptoms and a head and neck examination (including anterior rhinoscopy) are all that are required for the diagnosis of rhinosinusitis. Nasal endoscopy may be required in atypical cases of acute or subacute rhinosinusitis, but is most commonly reserved for recurrent acute or chronic sinusitis to identify potential anatomic sources of sinus obstruction and/or any sinus ostial source of nasal pus or fungal concretions for cultures (80 percent of the accuracy of the more painful sinus puncture technique), and to differentiate between severe allergic manifestations and infections.[2,3] Laboratory tests play a secondary role in the diagnosis of rhinosinusitis, and are commonly reserved for evaluating co-existing inhalant sensitivities, immunodeficiencies and, via biopsy, changes consistent with sarcoidosis, Sjogren's syndrome, ciliary dyskinesias and the like.

Plain sinus radiography can detect major maxillary, frontal or sphenoid sinus disease (opacification, air-fluid level or mucosal thickening greater than 6 mm in children or 8 mm in adults), or be used to follow the response of patients to pharmacotherapy. Coronal computed tomography (CCT) is the modality of choice for recurrent acute or chronic rhinosinusitis as only such can delineate the narrow middle meatal region from which the preponderance of maxillary, frontal, and ethmoid sinus disease originates. Note that a positive CCT does not always indicate either active bacterial infection or the need for surgery[5], and must be correlated with a patient's history and physical examination, as there is a 27 percent false positive CCT rate in adults, higher in children. The false positive rate in magnetic resonance imaging of the sinuses approaches 40 percent, and therefore is not recommended for routine evaluation of suspected sinusitis.[2,3,5]

Treatment for rhinosinusitis includes conservative measures, such as oral hydration, nasal humidification and/or saline irrigations, plus mucolytics and oral decongestants (topical decongestant acceptable for five days or less).[2,3] If there is any indication on the history and physical examination of inhalant sensitivities, topical steroids

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Table I: **Classification of Adult Rhinosinusitis**

Classification	Duration	History/Exam	Special Notes
Acute	up to 4 weeks	2 or more **Major Factors**, 1 **Major Factor** and 2 **Minor Factors**, or nasal purulence on examination.	Fever or facial pain/pressure does not constitute a suggestive history in the absence of other nasal signs or symptoms. Consider acute bacterial rhinosinusitis if symptoms worsen after 5 days, if symptoms persist for 10 days, or with symptoms out of proportion to those typically associated with viral infection.
Subacute	4 - 11 weeks	Same.	Complete resolution after effective medical therapy.
Recurrent Acute	4 or more episodes per year with each episode of at least 7 days; absence of intervening signs and symptoms	Same.	--
Chronic	12 weeks or more	Same.	Facial pain/pressure does not constitute a suggestive history in the absence of other signs or symptoms

Major Factors
- Facial pain/pressure*
- Facial congestion/fullness
- Nasal obstruction/blockage
- Nasal discharge/purulence by history or examination
- Hyposmia/anosmia
- Fever (acute rhinosinusitis only)**

Minor Factors
- Headaches
- Fever (in other than acute rhinosinusitis)
- Halitosis
- Fatigue
- Dental pain
- Cough
- Ear pain/pressure/fullness

* Facial pain/pressure alone does not constitute a suggestive history in the absence of another **Major Factor**.

** Fever in acute rhinosinusitis does not alone constitute a suggestive history in the absence of another **Major F**

Table 1. Classification of Adult Rhinosinusitis

are added to the regimen for all but acute rhinosinusitis, in which the coryza renders steroid penetration minimal. Immunotherapy should be considered in those with recurrent acute or chronic rhinosinusitis who have perennial inhalant sensitivities.

Acute and recurrent acute rhinosinusitis are treated with antibiotics for 10-14 days, and chronic rhinosinusitis for at least four weeks in adults and six-eight weeks in children, who have a higher remission rate after pharmacotherapy than do adults.[2,3] Antibiotic therapy is commonly empiric, based on the physician's knowledge of organisms common in the community and their antibiotic resistance patterns. In general, the incidence of beta-lactamase resistant organisms in previously untreated acute rhinosinusitis is less than 20 percent, ranging all the way to a 50 percent resistance in chronic rhinosinusitis. The most common organisms in acute disease include Streptococcus pneumoniae (31 percent), Hemophilus influenzae (21 percent), anaerobes (6 percent), Staphylococcus aureus (4 percent), Streptococcus pyogenes (2 percent), and Moraxella catarrhalis (2 percent).[6,7] In contrast, recurrent acute and chronic rhinosinusitis commonly harbor coagulase negative Staphylococcus species (51 percent) or Staphylococcus aureus (20 percent). Multiple organisms are much more common in chronic or recurrent acute rhinosinusitis, present in 16 percent of sinus aspirates.

The absolute indications for surgery for rhinosinusitis involve complicated acute rhinosinusitis (extrasinus spread of infection, such as to the meninges or orbit), massively obstructing nasal polyposis, mucopyoceles or fungal infections.[8] The relative indications for sinus surgery, for which a preponderance of the 200,000 cases in the United States are performed each year, include: (1) recurrent acute disease in which a persisting obstruction to sinus aeration or a specific area of recurring disease has been identified, and (2) chronic disease refractory to appropriate pharmacotherapy for an adequate period of time. Adenoidectomy is a useful adjunct to sinus surgery in children if such are chronically infected and/or are of sufficient size to impede nasal drainage or the airway. ❒

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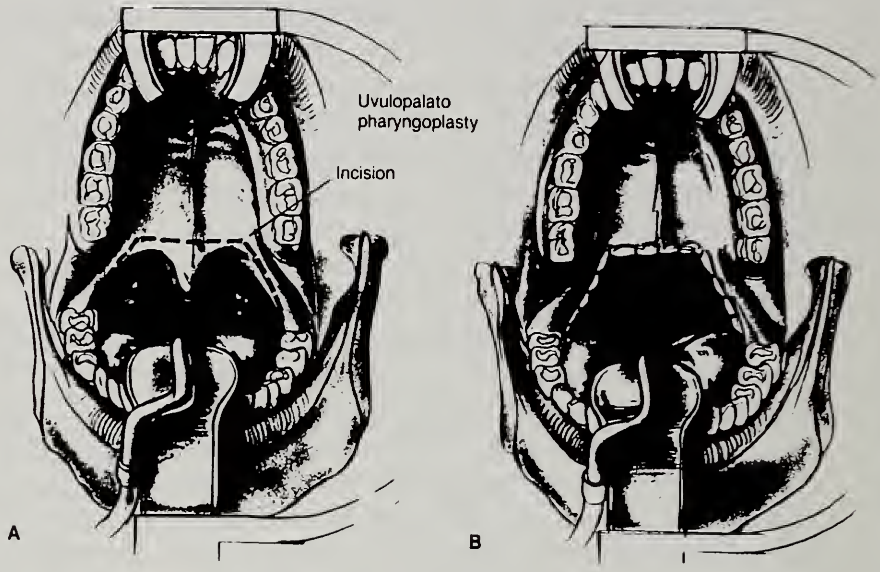
SLEEP DISORDERED BREATHING: AN OVERVIEW

DANIEL L. ROSNER, M. D. *

In 1965 Jung and Kuhl first described the abnormal breathing patterns seen in the Pickwickian Syndrome.[1] Since that time, numerous articles have been devoted to sleep abnormalities, with sleep disordered breathing (SDB) being the most prevalent type. SDB ranges in severity from simple snoring without arousal to an intermediate form called upper airway resistance syndrome (UARS) and ultimately obstructive sleep apnea (OSA) with associated oxygen desaturations.



Picture 1. Byron Bailey, et al., *Textbook of Head and Neck Surgery*, 1993

In order to better understand SDB, several terms need to be understood. Apnea is the cessation of airflow lasting for at least ten seconds, and hypopnea is a reduction in airflow rate by 50 percent.[2,3,4] The respiratory disturbance index (RDI or apnea/hypopnea index-AHI) is the sum of apneic and hypopneic events per hour. It is generally accepted that 60 percent of the adult population snore while four percent of men and two percent of women in the middle age work force have OSA.[5,6] As one ages, the likelihood of developing OSA increases.[7] Despite the prevalence of OSA in the general population, it is estimated that only five percent of patients with this problem are being diagnosed.[8,9] The failure to educate the lay population and the medical communities' oversight in diagnosing this problem has had societal impact. Patients with SDB have increased morbidity and mortality from causes ranging from cardiovascular to traffic accidents.[10,11]

The cause of SDB is impediment to airflow in one or more areas in the upper aerodigestive tract (nasal cavity to larynx). The most common sites of obstruction are the retropalatal area (posterior to the soft palate) and retrolingual area (posterior to the tongue base). With the negative pressure of inspiration, collapse of soft tissue into the aforementioned impairs the airway.

The evaluation of SDB begins with a history from the patient and his/her bed partner. Questions concerning snoring habits, witnessed breathing abnormalities, and daytime energy level should be addressed. The physical exam should note the patients' body mass index as well as areas of potential nasal or pharyngeal obstruction. Septal deviations, turbinate hypertrophy, tonsil hypertrophy, redundant soft palate/uvula, and macroglossia are a few of the more common causes. Ancillary procedures such as flexible nasopharyngoscopy, cephalometric analysis, and fluoroscopy may be used to more exactly pinpoint the area of airway compromise, but to date, none of these techniques are foolproof.

Once a patient is suspected of having SDB more severe than simple snoring, a polysomnogram (sleep study) should be ordered. Based on the RDI and oxygen desaturations, patients can be grouped into the following categories: RDI < 20-mild, 20-40-moderate, >40-severe.

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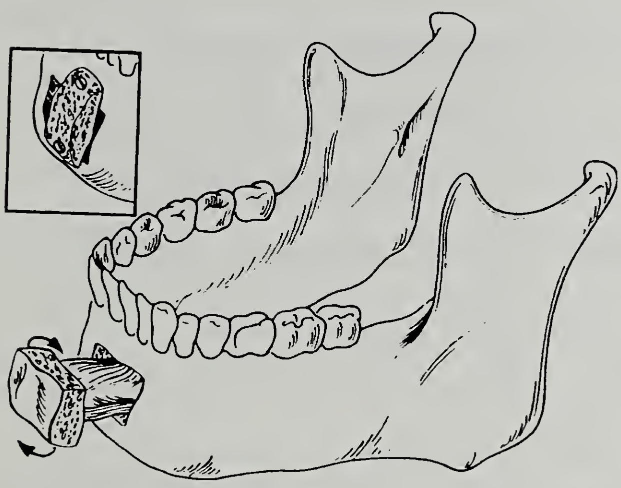


Picture 2.[20]

The importance of quantitating the degree of SDB is that treatment options will vary according to the severity.

Both nonsurgical and surgical treatments are currently available for SDB. Pharmacologic treatment has proven to be relatively ineffective, while dental splints (designed to position the tongue anteriorly in the oral cavity or advance the mandible anteriorly) have only a limited success in patients with mild to moderate disorders.[12,13] Weight loss should be encouraged as obesity appears to have a role in SDB.[12] The mainstay of nonsurgical treatment is nasal continuous positive airway pressure (cpap). This device drives air into the pharyngeal airway and thus acts as a pneumatic splint for collapsible soft tissue. The efficacy of cpap is 95 percent. Unfortunately, many patients do not tolerate the mask because of discomfort, claustrophobia, or nasal dryness.[14]

Because cpap does not offer a permanent cure and/or patients do not tolerate the mask, surgery remains an integral component in the treatment algorithm. Surgery should be divided into procedures for 1) simple snoring without arousal and 2) snoring with OSA.

Laser assisted uvulopalatoplasty (LAUP), which was introduced in the United States in 1992, and the more recently described somnoplasty technique are office based procedures designed to primarily treat patients who have snoring without arousal. Both procedures stiffen the soft palate and thereby diminish the vibratory sound of snoring. LAUP incorporates laser energy to cut and coagulate small portions of the soft palate. Somnoplasty involves placement of a probe into the soft palate, and through radiofrequency energy a submucosal scar is generated. Long term results are not yet available for somnoplasty.[15] LAUP has been shown to improve/cure snoring in 90 percent of patients with five year follow up,[16] and may have some success in treating mild OSA.[17]

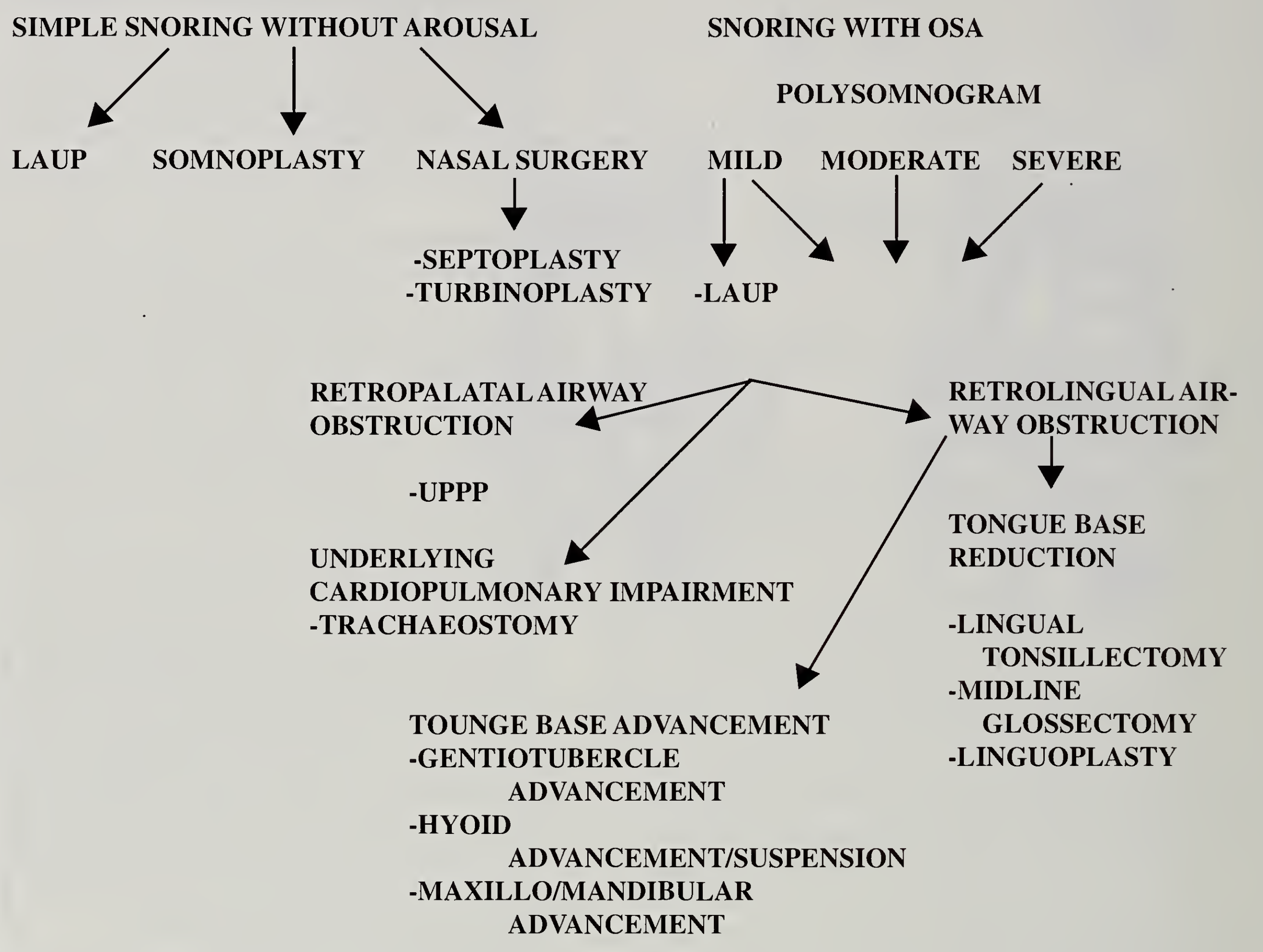
Tracheotomy was the first procedure used to manage snoring with OSA, and to date, is still the most effective invasive alternative. By creating an opening directly into the trachea, the obstructed upper airway is bypassed. Because of the psychosocial problems associated with a tracheostomy, it is generally reserved for patients with severe OSA who have significant cardiopulmonary impairment.[18]

Uvulopalatopharyngoplasty (UPPP) is currently the most common procedure performed for snoring with OSA. This operation, described in 1981 by Fujita et al[19], was the first technique which specifically addressed pharyngeal airway obstruction. By removing the tonsils, uvula, and a small portion of the soft palate, in addition to treating redundant tonsil pillar tissue, the operation increases the size of the oropharyngeal airway and stiffens collapsible tissue (see picture 1). The success of UPPP in curing snoring is 90 percent while OSA is cured in only 50 percent.[20]

UPPP does not address the retrolingual pharynx. Procedures designed to either reduce posterior tongue volume or advance the tongue base anteriorly can be important adjuncts. Midline glossectomy, lingual tonsillectomy, and linguoplasty reduce volume in the tongue base but significant morbidity may occur. Long term speech and swallowing problems, and the short term need for airway protection with a tracheotomy, are possible.[20] As a result, mandibular and hyoid advancement procedures, designed to move the tongue base anteriorly, have become the more accepted procedures for enlarging the retrolingual airway.

Mandibular advancement includes either an isolated portion such as the geniod tubercles or the entire mandibular body through bilateral sagittal osteotomies. The geniotubercle advancement consists of a bicortical rectangular osteotomy in

ALGORITHM OF SURGICAL TREATMENT OF SDB



the anterior mandible below the tooth apices with forward pull on the bone segment and its attached tongue muscles [20] (see picture 2). This procedure has the advantage of not altering dental occlusion unlike sagittal osteotomies. By combing geniotubercle advancement with UPPP, an almost 70 percent OSA cure rate is obtained.[21] The sagittal osteotomy operation has the advantage of advancing not only the tongue muscles but also the adjacent mylohyoid and digastrics, thus enlarging the airway even more. Le Fort I maxillary advancement is often performed in conjunction with a sagittal mandibular osteotomy, giving an additional benefit of forward pull on the soft palate.[22] This combination procedure has a success rate greater than 90 percent in curing OSA, but carries with it a significant amount of morbidity.[21]

Hyoid advancement involves suspending the hyoid bone to either the inferior border of the mandible or the superior border of the thyroid cartilage. This procedure increases the retrolingual airway dimensions by pulling the epiglottis, vallecula, and tongue base anteriorly.[20] It is often used in conjunction with a mandibular advancement operation or a UPPP.

Sleep disordered breathing continues to remain a serious, though often overlooked, medical condition. Both surgical and nonsurgical treatment options are available. It is imperative that each patients' condition be individualized in order to avoid a "cookbook" approach to their management. If a patient does not tolerate nonsurgical treatment, or elects to have surgery, the variety of surgical options should be tailored to the procedure which best addresses the region of obstruction. ❐

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APPROACHES TO THE PATIENT WITH HOARSENESS

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Hoarseness is the alteration of a patient's usual voice quality. A voice that sounds abnormal to the examiner may therefore be normal for the patient and vice versa. The initial approach to hoarseness is centered around a thorough history, establishing insight into the etiology and a basis in approaching the work up. Next is a thorough head and neck and laryngeal examination. This is usually accomplished with a laryngeal mirror and head mirror with reflective light. This method of indirect examination has been used by laryngologists since the early 1800s and is still very effective. With a little practice, this is something that any physician can learn. Headlamps are sometimes substituted for the head mirror if it seems more comfortable to use. Occasionally, a topical mucosal anesthetic may be needed to decrease the gag reflex. A flexible fiberoptic light can be used especially in the situation when visualization of the larynx is difficult. This can give a permanent recording and pictures with the proper equipment.

Most types of hoarseness will clear up with symptomatic treatment. Occasionally the disease causing the hoarseness is treated without examining the larynx; but it is very important to remember that if the hoarseness persists after the initial treatment or lasts more than two weeks, it should be investigated by an otolaryngologist so that a thorough examination of the larynx is performed. An underlying carcinoma or some occult problem will usually lead to an increased morbidity and mortality if it goes undiagnosed.

Hoarseness may be divided into either an acute or a chronic type depending on the suddenness of onset and the length of time the hoarseness has been present. The acute onset may stem from voice abuse or trauma, such as too much yelling at ball games or vigorous coughing episodes associated with pulmonary disease or respiratory infection. Here the treatment may simply be voice rest. Acute onset may be secondary to a vocal cord paralysis or paresis. Here again the history may give important clues as to why the recurrent laryngeal nerve has been interrupted. Things such as carotid surgery in the past, recent intubation, and thyroid surgery are some of the problems that are more obvious. With this type of hoarseness the voice has more breathiness, an inability to project the voice, and difficulty in phonating long sentences. The recurrent laryngeal nerve on the left passes down the neck, into the chest cavity and around the aorta. Undiagnosed thyroid cancers with involvement of the recurrent laryngeal nerve can be one of the causes of paralysis. With this type of laryngeal problem, the thyroid work up and of course a chest x-ray are imperative to evaluate the course of the recurrent laryngeal nerve in the neck and mediastinum. Aortic aneurysms, congestive heart failure and mediastinal lymphadenopathy secondary to metastatic disease have to be considered with vocal cord paralysis.

Chronic hoarseness may have other factors as the etiology. Gastroesophageal reflux disease (GERD) has been implicated in patients with chronic hoarseness. Here again a history of reflux can usually be elicited. Most patients have been taking over the counter medication for heartburn and some are taking newer prescription agents such as oxemazedon. This hoarseness is usually a more gruff voice and the disease is evidenced by erythema of the arytenoid area and posterior larynx, and occasional posterior granuloma formation. With treatment of the underlying disease process, the laryngeal problem will usually subside.

The patient's occupation may give a clue in chronic hoarseness problems. Someone who works in a dusty, smoky or other type of environmentally contaminated atmosphere may have chronic irritation of the laryngeal mucosa. People who work in voice intense occupations such as singers, school teachers and the like are more prone to vocal cord nodules from misuse and perhaps over use of the voice. The voice usually im-

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proves with symptomatic treatment and voice rest. Speech therapy by a speech pathologist helps a great deal in dealing with this problem. Surgery is generally not required but may be needed in some patients. Allergic problems may cause edema of the mucous membranes and give the patient a chronic hoarseness problem. Medications that have a drying effect such as diuretics, antidepressants, and some antihistamines may cause some problems. The mucous membranes should stay moist and drying agents should be discontinued if possible. The patient should be encouraged to force fluids during the day, as proper hydration will alleviate some of the problem. In fact forcing fluids and keeping the mucous membranes moist greatly aids in the treatment of most benign laryngeal problems.

Vocal cord polyps may be secondary to allergy and/or infection and fit into the chronic problem category. Polyps usually are more persistent and generally require surgical removal and then treatment of the underlying cause.

A patient who is a cigarette smoker and comes in with hoarseness should be considered a high-risk patient in terms of developing carcinoma. Sometimes occult carcinoma has been masked by treatment of what was thought to be an acute or benign disease, and although the hoarseness improves with treatment, the underlying carcinoma may still be present. If there is any doubt as to the diagnosis the patient should be checked by someone trained in laryngeal examination and treatment. All patients should be encouraged to stop smoking. There are a number of pharmaceutical preparations (that mostly contain nicotine) that can be of help in this endeavor.

After the history and laryngeal examination have been performed, certain diagnostic tests may be in order. Some of these studies have already been alluded to and when indicated include computed tomograms, thyroid scans, thyroid function studies, chest x-ray, and videostroboscopy whereby the larynx can be examined in a functioning almost slow motion state. This is usually reserved for the more sophisticated subtle laryngeal problems.

The treatment of laryngeal hoarseness will of course vary with the diagnosis. Upon referral to an otolaryngologist, a direct laryngoscopy may be in order. This is usually done on an outpatient basis and can be performed under general or local anesthesia. This is a useful procedure for diagnostic purposes and for biopsy and staging of a malignant lesion. It may also be performed for definitive treatment in the case of excision of a benign laryngeal lesion.

In conclusion, hoarseness is a prevalent problem not only in the otolaryngologist's practice but also in the primary care setting. With a thorough history and proper examination of the larynx most problems with hoarseness can be solved quite simply. For those other situations, and knowing one's limitations, referral to an otolaryngologist may be needed for diagnosis and treatment. ❐

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EVALUATION OF THE NECK MASS

MARK T. EMERY, M. D.
JULIE A. NEWBURG, M. D.
ROBERT C. WATERS, M. D.

INTRODUCTION

The differential diagnosis for the patient presenting with a neck mass is one of the more complex dilemmas facing the primary care practitioner. Possible etiologies can range from infectious or congenital to neoplastic. A systematic approach is often the key to establishing the correct diagnosis and appropriate treatment.

HISTORY

When gathering pertinent history from the patient with a neck mass, one of the most important initial factors to consider is age. This is particularly relevant because in younger patients (< 40 years old), a neck mass most commonly represents a benign disorder, while in those over 40, malignancy is a significantly greater likelihood.[1,2] In fact, some authors have noted that nearly 80 percent of neck masses in adults over 40 are neoplastic, and 80 percent of these are malignant (thereby proposing a "rule of 80's").[3] The initial branch on our evaluation algorhithm is based on the patient's age (Fig. 1).

A fairly straightforward set of questions can then serve to narrow the differential. Among the routine questions should be inquiries about rapidity of onset, duration of symptoms, and any associated complaints such as pain, fever, dysphagia, odynophagia, weight loss and otalgia. Expanding the history to include past medical problems (eg. diabetes, tuberculosis exposure), current medications, and socially relevant factors (tobacco abuse, alcohol consumption, occupational and travel related exposures, trauma, and sexual history) are all key to making the diagnosis.

Many of the features in the history can suggest the etiology. Rapid onset of symptoms such as swelling, pain, and fever suggest infectious/inflammatory sources, while an insidious progressive course with dysphagia, otalgia, persistent sore throat, and unexplained weight loss all favor malignancy. Of note, an asymptomatic neck mass in children is not only the most frequent presentation for a head and neck malignancy, but also for branchial cleft or thyroglossal duct cysts.[4]

PHYSICAL EXAM

When examining the patient with a neck mass it is incumbent upon the physician to remember that neck disease may be only a manifestation from another source (eg. metastasis from an oral cavity carcinoma). Before focusing on the mass, we perform a thorough head and neck inspection. Flexible fiberoptic nasopharyngoscopy, with its enhanced lighting and superior optics has greatly facilitated evaluation of the mucosal surfaces of the nasal cavity, pharynx, and larynx. Following this, digital palpation of the neck is accomplished. Neck masses are characterized based on location (midline or lateral) and relation to other major structures (thyroid cartilage, sternocleidomastoid). Consistency of the lesion is also recorded (firm, soft, or fluctuant), and a judgement is often made regarding the mobility of the mass. Finally, additional findings are noted such as tenderness, erythema, associated pits or drainage, and the presence of bruits. After examining the head and neck, other appropriate systems including cardiopulmonary, lymphatic, abdominal, musculoskeletal, and dermatologic are reviewed.

Different features of the neck mass will suggest a specific diagnosis. For instance, congenital lesions tend to appear in characteristic locations: thyroglossal duct cysts and dermoids in the midline, and branchial cleft cysts just anterior to the sternocleidomastoid (SCM). Malignant neoplasms of the upper aerodigestive tract (most commonly squamous cell carcinoma) likewise tend to metastasize to fairly predictable locations based on patterns of lymphatic drainage. Some examples of these include the anterior floor of mouth spread-

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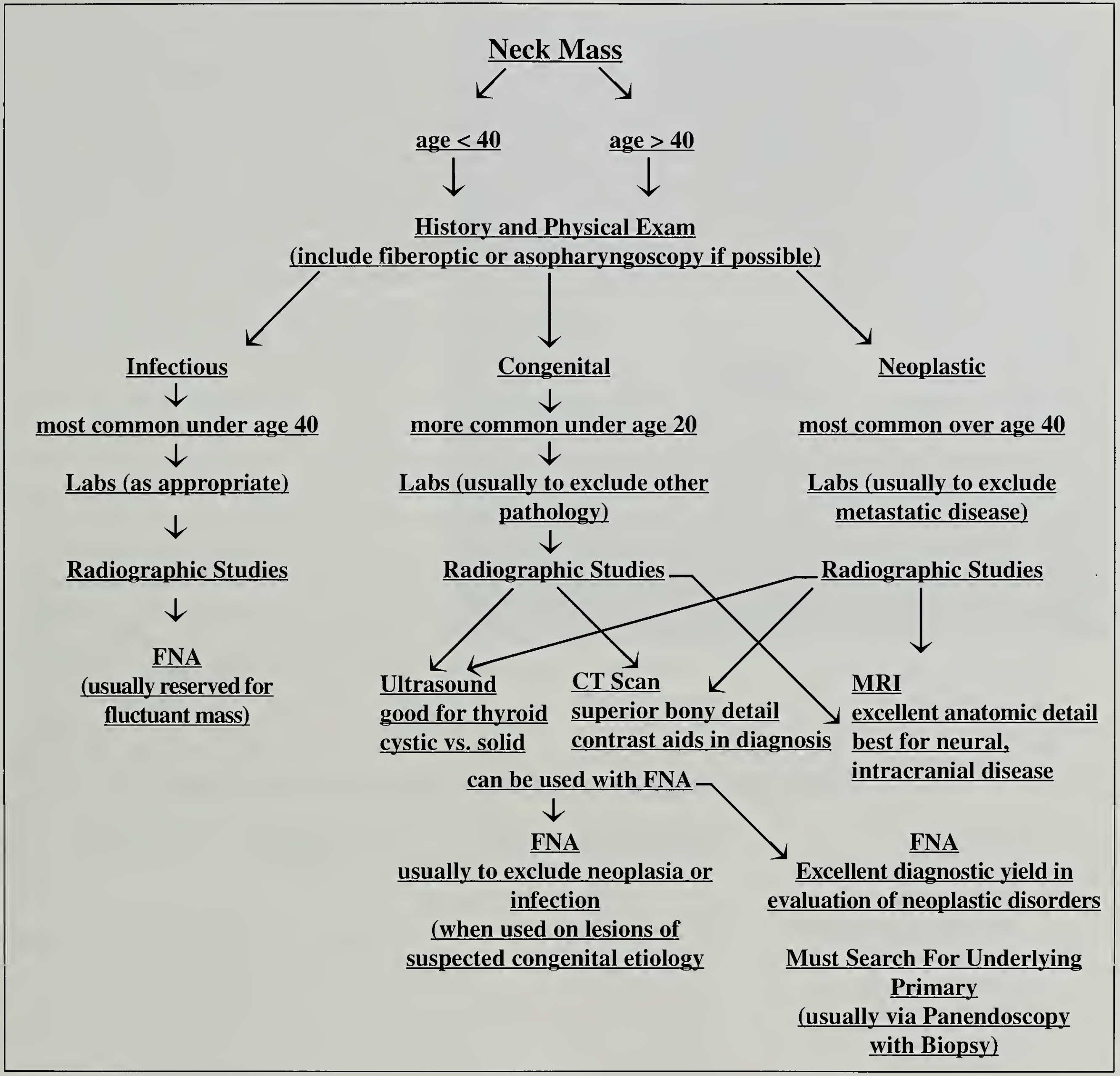
Neck Mass
age < 40
age > 40
History and Physical Exam
(include fiberoptic or asopharyngoscopy if possible)
Infectious
most common under age 40
Labs (as appropriate)
Radiographic Studies
FNA
(usually reserved for fluctuant mass)
Congenital
more common under age 20
Labs (usually to exclude other pathology)
Radiographic Studies
Neoplastic
most common over age 40
Labs (usually to exclude metastatic disease)
Radiographic Studies
Ultrasound
good for thyroid
cystic vs. solid
CT Scan
superior bony detail
contrast aids in diagnosis
MRI
excellent anatomic detail
best for neural, intracranial disease
can be used with FNA
FNA
usually to exclude neoplasia or infection
(when used on lesions of suspected congenital etiology
FNA
Excellent diagnostic yield in evaluation of neoplastic disorders
Must Search For Underlying Primary
(usually via Panendoscopy with Biopsy)

Figure 1. Evaluation algorithm

ing to the submandibular/submental triangles, and nasopharyngeal carcinoma to the neck nodes posterior to the SCM.

Otolaryngologists tend to divide the neck into levels (currently referred to as Levels I-VI) to more easily communicate their findings to colleagues, however anatomic triangles with clearly defined borders work equally well. The neck mass can be described by its relation to these anatomic triangles. The submandibular triangles are defined by the anterior and posterior bellies of the digastric, while the submental triangle lies medial to these, below the mandible, and above the hyoid. The anterior triangles encompass everything else from the midline to the SCM, while the posterior triangles refer to the region posterior to the SCM and superior to the clavicle. No matter what system is used, an orderly approach to describing and recording the neck findings will greatly improve the physician's diagnostic thought process as well as his or her ability to relate to consultants.

SEROLOGIC AND RADIOGRAPHIC TESTS

After a thorough history and physical exam, certain laboratories and radiologic tests may well be indicated. In pediatric patients and young adults whose clinical picture suggests infection, a CBC with differential and monospot results may support a diagnosis. Likewise, when autoimmune processes are entertained, appropriate tests may include ESR, ANA, RF levels, as well as serologic tests for SS-A and SSB antigens when Sjogren's Syndrome is considered. In patients with multiple or recurrent parotid cysts, an HIV test is mandatory to rule out this possibility. Ancillary tests, not always required as part of the initial workup, may include skin testing for response to fungal and tuberculin antigens, or a Warthin-Starry stain from biopsy material for cat scratch disease.

Radiographic analysis is likewise tailored to the differential diagnosis. Chest roentgenograms are helpful in cases where tuberculosis, pulmonary neoplasia, or sarcoidosis are considered. A panorex is useful for odontogenic sources of infection or malignancy. Finally, Magnetic Resonance Imaging and Computed Tomographic Scans can be obtained to further define the extent of the disease and to lend support as to the exact diagnosis. Certain features noted on these imaging modalities are highly suggestive as to etiology. For instance, the hypointense central region of the lymph node demonstrated in Figure 2 is commonly seen in metastatic lymphadenopathy from head and neck primaries. Sometimes, in patients with short thick necks, smaller lesions can be difficult to palpate, and a CT scan can significantly aid in detection.

Evaluation of thyroid masses, thyroglossal duct cysts, and other less common lesions can also be accomplished with ultrasound. Ultrasound is an inexpensive means of characterizing cystic vs. solid structures, and can be used to assist with diagnostic tests such as Fine Needle Aspiration (FNA). In addition, evaluation of thyroid nodules can also be accomplished with nuclear medicine (Thyroid Scan). This study usually classifies masses as "hot" or "cold". This is clinically useful since hot nodules are usually active metabolically and have a low probability of malignancy, whereas cold nodules are not active and have a higher likelihood of malignancy.

Differential Diagnosis for Common Causes of the Neck Mass

Congenital
- Branchial Cleft Cyst
- Thymic Cyst
- Thyroglossal Duct Cyst
- Dermoid Cyst
- Lymphangioma
- Sebaceous Cyst
- Laryngocele

Infectious/Inflammatory
- Lymphadenitis (viral, bacterial, fungal, mycobacterial)
- Sialadenitis/Parotitis
- Toxoplasmosis
- Cat Scratch Disease
- Kawasaki's Disease
- Sjogren's Syndrome
- Sarcoidosis
- AIDS

Neoplastic
- Benign-
  - Lipoma
  - Paraganglioma
  - Neurofibroma
  - Hemangioma
  - Lymphangioma
  - Thyroid Adenoma
  - Parathyroid Adenoma
  - Salivary Neoplasms (e.g. pleomorphic adenoma)
- Malignant -
  - Metastatic Squamous Cell Carcinoma
  - Rhabdomyosarcoma
  - Neurofibrosarcoma
  - Osteosarcoma
  - Lymphoma
  - Thyroid Malignancy
  - Salivary Malignancy (e.g. adenoid cystic cancer)

FINE NEEDLE ASPIRATION

Further evaluation of the neck mass not infrequently requires obtaining material tor histologic analysis. Performing FNA is usually the method of choice for initially obtaining a specimen. Such is safe, easy to perform in clinic, and generally well tolerated. In the cases of infection, fluid can be sent for culture, while in the the cases of neoplasia FNA has a very acceptable sensitivity and specificity which has been reported to approximate 81 percent and 99 percent respectively, in determining the nature of a malignant process.[5,6] When FNA results fail to reach a diagnosis, and no other lesion of the upper aerodigestive tract is noted despite an exhaustive search, only then should one proceed with open biopsy. Several authors have suggested the potential morbidity associated with excisional biopsy of a metastatic cervical node, so excisional biopsy should be used only as a method of last resort.[7,8] It is incumbent upon the physician doing the procedure to give an accurate and detailed history on the patient to the cytopathologist to assist in making the diagnosis.[9]

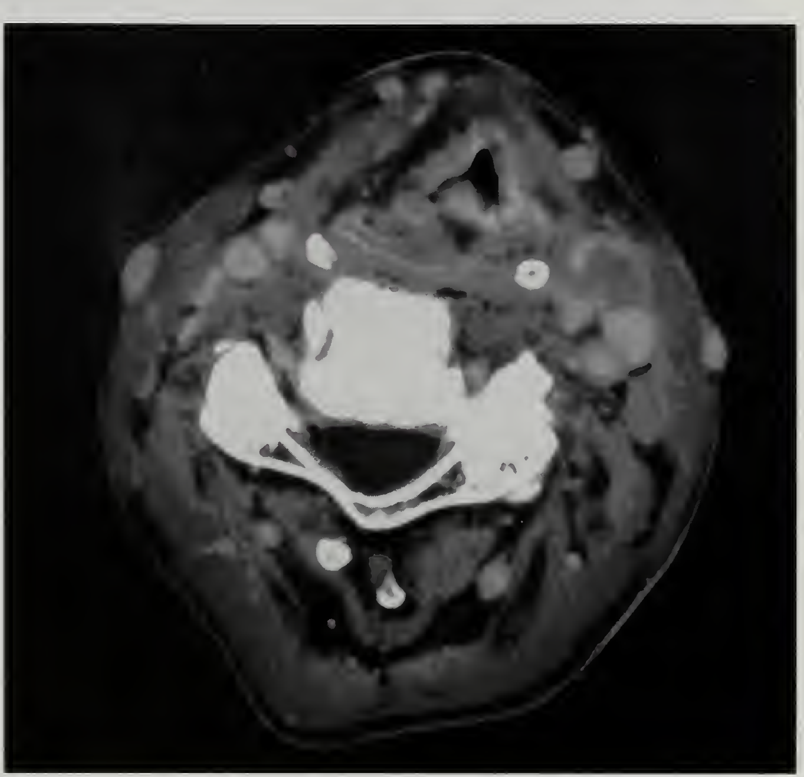

Figure 2

DIFFERENTIAL DIAGNOSIS

As stated previously, the differential diagnosis for neck masses can be complex. In order to simplify matters it is helpful to categorize patients as children (< 20 years old), young adults (20 - 40 years), or mature adults (> 40 years). In the young, infectious causes top the list for neck masses, followed by congenital, then neoplastic. For young adults, infections are still first, but neoplastic lesions (most commonly lymphoma) equal or surpass congenital disease. In adults over 40, neoplasia (benign or malignant), with squamous cell carcinoma most common, remains the primary cause of a neck mass.

An exhaustive discussion of the specific features of neck masses is beyond the scope of this paper. The differential as noted and categorized (Figure 1) is quite large. Some specifics are worth noting. Malignancies presenting as a neck lesion rarely arise in the cervical lymphatics, with the possible exception of lymphoma in children. While palpable supraclavicular adenopathy mandates a search for a primary below the clavicles, any malignant process in the lymphatics should be presumed metastatic and a thorough search conducted for the source. Note that the left supraclavicular nodes drain the left breast, left lung, mediastinum, and right lower lobe. The right supraclavicular nodes drain the right breast, right upper lobe, and all organs below the diaphragm.

Infectious, inflammatory, and granulomatous neck disease may present as involvement of the cervical lymphatics. However, these entities may also present through their involvement of the salivary glands (submandibular and parotid). Treatment options for these processes range from antibiotics, to systemic steroids, to surgical excision (ie. for atypical mycobacterial infections). Congenital lesions may present as isolated anomalies or in conjunction with a known syndrome. In addition, a congenital mass such as a branchial cleft cyst may only be recognized when secondarily infected after a recent upper respiratory tract infection. Definitive surgical excision usually awaits treatment of the infectious process first (needle aspiration of the pus plus oral antibiotics speeds resolution). Thorough evaluation of congenital masses and their relation to the rest of the head and neck is crucial. For instance, thyroglossal duct cysts as remnants of the thyroglossal duct may harbor active thyroid tissue. An ultrasound of the neck is essential to establish the presence of a normal thyroid gland in addition to characterizing the actual cyst.

Although not specifically stated earlier, the size of the neck mass is also a useful parameter. Masses greater than 1 cm are generally considered abnormal. In addition, by measuring the dimensions of the lesion, one can more accurately follow the patient's response to therapy. Persistence of disease despite an adequate trial of therapy, ideally 2 to 3 weeks of antibiotics in the case of presumed infections, probably warrants fine needle aspiration.

SUMMARY

The foundation for arriving at the correct diagnosis on the patient with a neck mass is based on thorough history and physical evaluation. Following this initial exam, further diagnostic tools, particularly radiographic results and often FNA, are critical in establishing the etiology, and therefore treatment. By creating a logical algorithm to follow in working up a neck mass, the primary care practitioner can both more rapidly arrive at the correct diagnosis and, if indicated, refer the patient to the appropriate specialist for any further care. ❐

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FACIAL PLASTIC SURGERY: NEW SOLUTIONS FOR "OLD" PROBLEMS

LOUIS E. COSTA, D. M. D., M. D.*

"I am convinced that nothing has so marked an influence on the direction of one's mind as his or her appearance, and not the appearance its' self so much as the conviction that it is attractive or unattractive."—Leo Tolstoy, *Childhood*

Aesthetic surgery of the face is one of the fastest growing disciplines in medicine. The explanation for this popularity is multifaceted. By any risk benefit assessment, these procedures are safe, predictable, and gratifying. Not unlike the goal of modern medicine in general, the bottom line is enhanced quality of life. The behavioral science and the clinical psychology literature is replete with well-controlled, objective studies. They indicate that attractiveness or enhanced appearance can predispose to more positive self-concept and engender social and professional success.[1] Certainly it would be of no benefit to us or our patients to deny the role that appearance plays in contemporary culture.

Plastic surgery can be broadly divided into reconstructive and cosmetic procedures. In reconstructive surgery, the objective is to restore the abnormal to normal. With cosmetic surgery, the goal is to take the "normal" and make it better. Cosmetic procedures can be applied to developmental or congenital conditions such as obtrusive noses and lop ears, or acquired conditions with the treatment of actinic damaged skin and age related features.

Historically popular, cosmetic procedures are now in higher demand due to procedural and technical advances. The "facelift" operation is one such procedure. This is the "workhorse" for treating age-related laxity in the lower face, improving nasolabial folds, jowls and "double chins". The procedure can be performed in office based surgical suites under intravenous sedation and generally takes less than two hours. The ideal age for surgical intervention in the treatment of age related changes is the mid-forties to early fifties. Interestingly, more men are seeking rejuvenative intervention, and now one fourth of the author's practice are males (Fig.1). Another interesting statistic indicates that 70 percent of Americans do not like the configuration of their noses, yet rhinoplasty until recently was a dreaded alternative. Today rhinoplasty is an acceptable option with newer techniques avoiding nasal "packing", and generally little bruising or swelling.

On the technological front, the field of aesthetic surgery has not gone unnoticed by innovators seeking to satisfy demand. Of particular interest have been conservative, less invasive procedures, and the application of alloplastic implants. Chin projection, always considered an important craniofacial feature, can now be achieved with convenience and low morbidity.[2] Mandibular osteotomies, though still indicated in some pathologic settings, have been replaced with safe biocompatible implants through small inconspicuous incisions (Fig 2). One of the most commonly used materials is polytetrafluoroethylene (Gore-Tex), which has a proven 20 year track record in vascular grafting applications. Another trend in aesthetic surgery has been lip augmentation. Thin lips have never been a desirable, feminine attribute, and for the patient with labial hypoplasia, the atrophy of fat and muscle mass with age produces further thinning. Again the resolve is Gore-Tex. Through a three mm intraoral incision, a permanent, natural augmentation can be performed under local anesthesia in approximately 30 minutes,[3] literally a lunch hour procedure with the patient often able to return to work thereafter. Treatment of depressed scars due to trauma or acne has long been a formidable task for the facial plastic surgeon. In many instances the defect is due to loss of dermal mass compounded by scar contracture. Subcutaneous augmentation using dermal homograft, AlloDerm (LifeCell Corp) is an answer. Again, under local anesthesia, a one to

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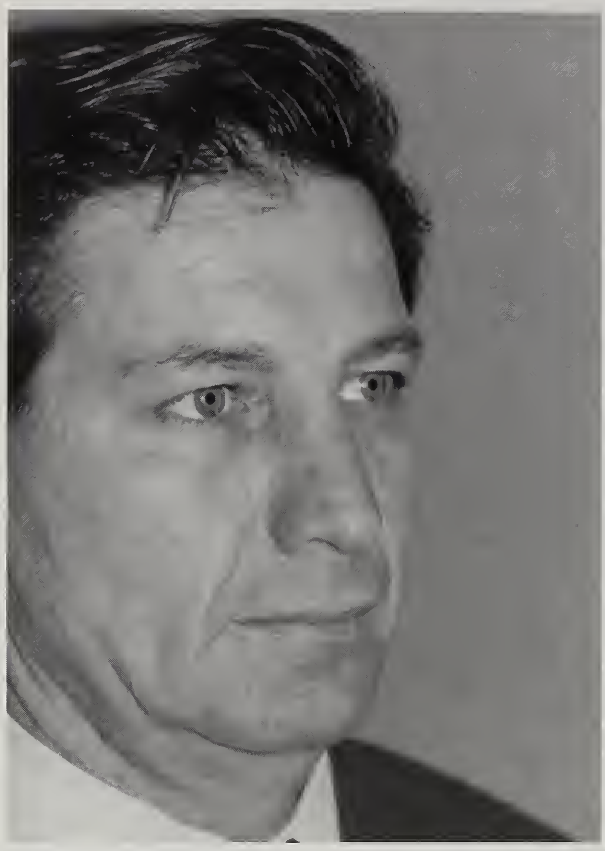

Figure 1. Before Facelift and Chin Augmentation

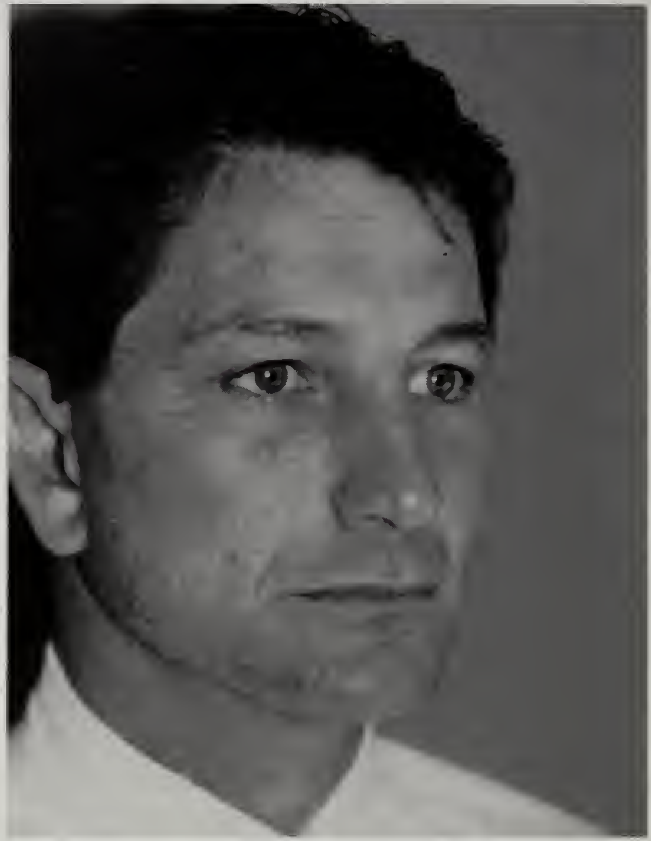

Figure 1. After Facelift and Chin Augmentation

two mm incision can be made adjacent to the defect, the cicatrix lysed with micro-instrumentation and the augmentation graft inserted. This procedure often obviates the need for more invasive traditional procedures.

The desire for "non-invasion" has spurred development in several other areas, especially the endeavor to eliminate the "dreaded wrinkle." Of particular concern to discerning patients are periorbital rhytides, as well as the glabella folds that develop between the brows, commonly referred to as frown lines. The resulting scowl provokes negative social and emotional connotations. The technically simple, non-invasive alternative is Botulinium Toxoid type A (BoTox), a neuromuscular junction-blocking agent produced by bacterium Clostridium botulinum.[4] It acts by blocking the release of the neurotransmitter acetylcholine, so muscle weakness results. It does not alter the muscle or the nerve, but prevents the relay of information between the two. The toxoid has been used for years to treat strabismus, blepharospasm, and other debilitating spastic disorders. The solution is utilized to paralyze specific motor groups in order to effect a therapeutic purpose. Through the injection of microdroplets into the obicularis oculi and corrugator muscles respectively, wrinkles and fine rhytides in the "crows feet area" as well as furrows between the brows can be alleviated. Risks and negative sequella are uncommon. However, the desirable, aesthetically pleasing effect is transient and retreatment every four to six months is required. Less invasive endoscopic surgery techniques have also been applied to aesthetic surgery. Through three small incisions, made within the hairline, fiberoptic endoscopic visualization of subcutaneous anatomy can be achieved in the forehead region. The corrugator muscles can be lysed and the brows advanced superiorly, giving a rested, relaxed countenance. The technique eliminates the concern for long incisions and potential hair loss which characterized more aggressive techniques. Similarly, significant advances have been made toward improving the texture of the skin and reverse the effects of actinic exposure. Techniques

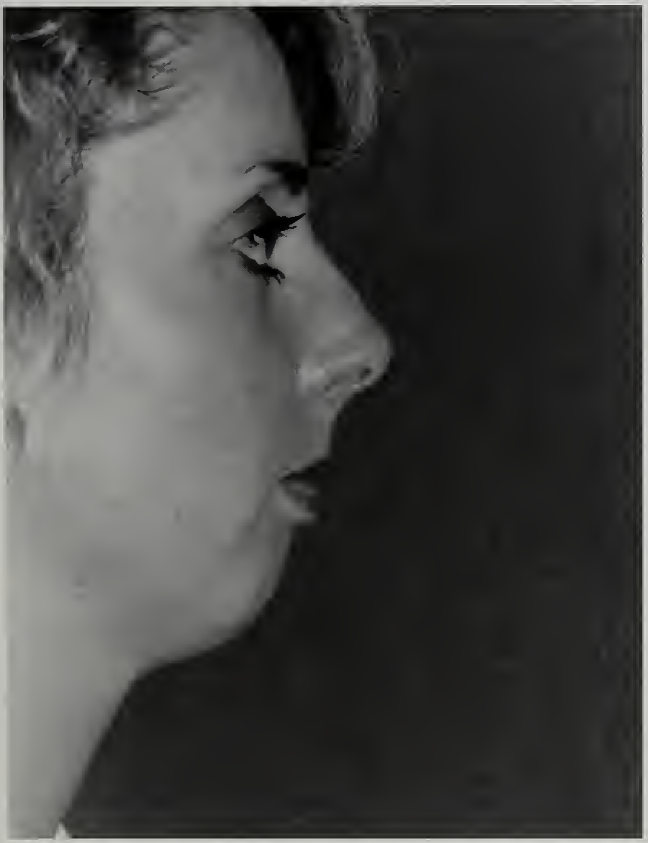

Figure 2. Before Rhinoplasty and Orthognathic Surgery with Chin Enhancement

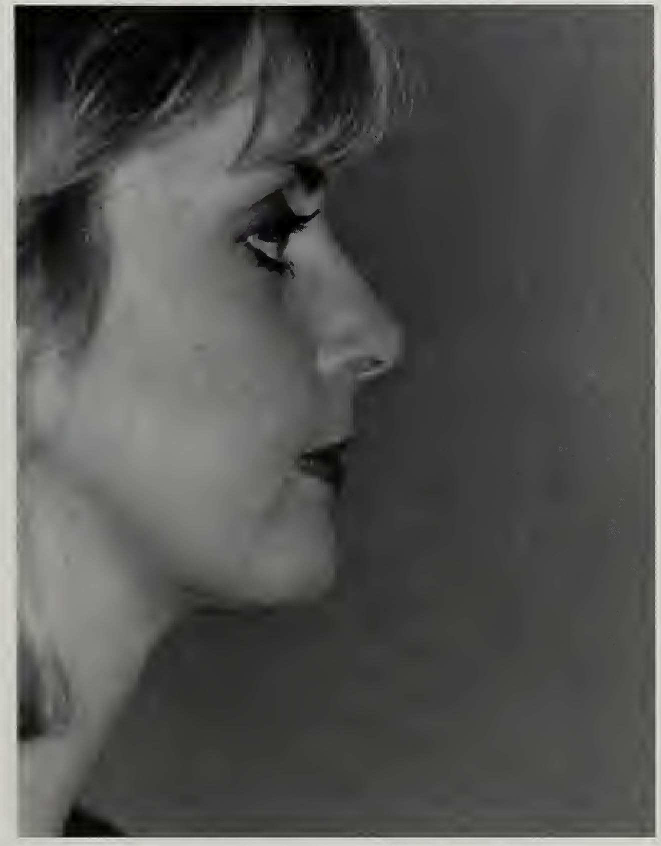

Figure 2. After Rhinoplasty and Orthognathic Surgery with Chin Enhancement

known collectively as "resurfacing procedures" include chemical peels, dermabrasion, and laser vaporization. The common endpoint of all these modalities is the removal of epithelium while preserving the regenerative capacity of the skin appendages. Deep chemical peeling, usually with a solution containing phenol, removes epithelium by denaturing protein and thereby causing an inflammatory epidermolysis. Dermabrasion, on the other hand, involves a mechanical, epidermal attrition through the use of rotary instrumentation. Laser applies intense heat of a pulsed or ultrashort duration at a wavelength capable of epithelial vaporization without irreparable damage to the appendaged tissue or dermis.[5] Regardless which technique is employed, the process removes actinic damaged skin inclusive of premalignant keratosis and fine wrinkles imprinted in the dermis. Cosmetically, the result is a smoother, more "youthful" skin. Historically, superficial scarring and hypopigmentation were frequent adverse responses. Recent advances in the laser technology have offered several advantages. The depth of penetration can be more precisely determined, making operator technique less critical. The treatment takes less time, scarring and hypopigmentation are rare and the energy can be concentrated more specifically to problem areas like deep rhytides. However, erythema may still last for weeks after resurfacing. The patient should be cautioned that resurfacing is a topographic treatment modality and it does not take the place of the facelift procedure, which restores support and eliminates laxity.

Justification for elective, aesthetic surgery must ascribe to the basic tenants of any medical treatment: the perceived benefits should convincingly outweigh the likelihood of an untoward result. Improvements in conventional facial plastic surgery procedures as well as technological innovations are playing an integral role in accommodating this imperative. ❐

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JANUARY

No listings for January 1999.

FEBRUARY

Friday February 5, 1999
Charleston, SC: Sheraton Hotel
Issues in Medical Ethics – Palliative Care
SPONSOR: Medical University of South Carolina
TARGET AUDIENCE: Physicians, nurses, and health care administrators
FACULTY: Guest and MUSC faculty
CONTACT: Odessa Ussery; (843) 876-1925

Friday – Saturday February 5-6, 1999
Greenville, SC: Hyatt Regency
S.C. Chapter of the American College of Surgeons Annual Conference
SPONSOR: American College of Surgeons
TARGET AUDIENCE: Surgeons
TUITION: $200 for members, no charge for residents
CONTACT: Tara Smith; (803) 798-6207, ext. 242
CREDITS: 7.75 hours, AMA Category 1

Monday – Saturday February 15-20, 1999
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Primary Care and Family Practice Symposium
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TARGET AUDIENCE: Multi-speciality
CONTACT: Division of Continuing Education; (706) 721-3967 or (800) 221-6437
CREDITS: 52.25 hours, AMA Category 1

Thursday – Saturday February 18-20, 1999
Charleston, SC: Sheraton Hotel
S.C. Professional Colloquium on Child Abuse
SPONSOR: Medical University of South Carolina
TARGET AUDIENCE: Physicians, nurses, social workers, and law enforcement personnel
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Friday – Saturday February 26-27, 1999
Augusta, GA: Radisson Riverfront Hotel
Flexible Fiberoptic Sigmoidoscopy
SPONSOR: School of Medicine, Medical College of Georgia
TARGET AUDIENCE: Family practice, internal medicine, general practitioners
CONTACT: Division of Continuing Education; (706) 721-3967 or (800) 221-6437
CREDITS: 14 hours, AMA Catergory 1

Saturday February 27, 1999
Charleston, SC: Embassy Suites Hotel
4th Annual Liver Disease and Transplantation Symposium
SPONSOR: Medical University of South Carolina
TARGET AUDIENCE: Gastroenterologists and internists
FACULTY: Guest and MUSC faculty
CONTACT: Pamela Benjamin; (843) 876-1925

Friday - Sunday March 5-7, 1999
Pawleys Island, SC: Li hfield Beach and Golf Resort
S.C. Psychiatric Associ Annual Meeting
SPONSOR: William S. Psychiatric Institute
TARGET AUDIENCE: iatrists
TUITION: $125 membe non-members, $50 residents
CONTACT: Tara Smith; (207, ext. 242
CREDITS: 9 hours, AMA

Sunday - Wednesday March 7-10, 1999
Charleston, SC: Mills House Hotel
Neonatal Nutrition
SPONSOR: Medical University of South Carolina
TARGET AUDIENCE: Primary care physicians
FACULTY: Guest and MUSC faculty
CONTACT: Diane Anderson, PhD, RD; (843) 792-2112

Friday - Saturday March 26-27, 1999
Columbia, SC: South Carolina State Museum
21st Annual Carolina Cup Symposium
SPONSOR: USC School of Medicine – Palmetto Richland Memorial Hospital CME Organization
DESCRIPTION: Update on current issues in clinical pediatrics and family medicine.
TARGET AUDIENCE: Primary care physicians, nurses, nurse practitioners
FACULTY: Lawrence Afron, MD; George Kotchmar, MD; Jerry Jabailey, MD; Wayne Wert, PharmD; Rod Walters, PhD; William Woods, MD
TUITION: $160 physicians, $80 non-physician
CONTACT: Steven C. Hasterok; (803) 434-4211
CREDITS: 7.25 hours, AMA Category 1

Friday - Saturday March 26-27, 1999
Augusta, GA: Radisson Riverfront Hotel
Ophthalmology
SPONSOR: School of Medicine, Medical College of Georgia
TARGET AUDIENCE: Ophthalmologists
CONTACT: Division of Continuing Education; (706) 721-3967 or (800) 221-6437
CREDITS: 10 hours, AMA Category 1

Monday – Tuesday March 29-30, 1999
Charleston, SC: Charleston Place Hotel
9th Charleston Pulmonary and Critical Care Symposium
SPONSOR: Medical University of South Carolina
DESCRIPTION: This symposium is designed to provide a clinically based update in pulmonary and critical care medicine. The two day course will emphasize a pathophysiologic approach to diagnosis and management.
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On the Cover

ENT

The picture on the cover of this special issue devoted to ENT is a plate from *Tabulae Anatomicae* by Bartolomeus Eustachius. This book was one of the original 17 presented to the Medical Society of South Carolina in 1791 as the beginning of "a library for the use of its members." The Medical Society Library forms the nucleus of the collections of the Waring Historical Library. Elisha Poinsett (1745-1803) was the donor of Eustachius's book[1] which is described by Garrison:

> "The plates in his book were the first anatomic plates on copper. The execution of these plates is dry and hard, but they are more accurate in delineation than those of Vesalius. . . . Eustachius was professor at the Collegia della Sapienza in Rome, where, in 1552, he completed his *Tabulae Anatomicae* (a set of superb plates drawn by himself) which remained unprinted in the Papal Library for 162 years. Finally, Pope Clement XI presented the engraved plates to his physician, Lancisi, who by the advice of Morgagni, published them with his own notes in 1714. . . . Eustachius discovered the Eustachian tube, the thoracic duct, the suprarenal bodies and abducens nerve; described the origin of the optic nerves, the cochlea, the pulmonary veins, the muscles of the throat and neck, gave the first correct picture of the uterus, and wrote the best treatise of his time on the structure of the teeth (1563 in *Libellus de dentibus*), giving the nerve-and blood-supply. Although Eustachius declined to oppose Galenism, he was a natural genius in discovery." [2]

Jane McCutchen Brown, Curator
Waring Historical Library

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Alliance Page

PHYSICIANS FAMILY SUPPORT

Because physicians are dedicated to helping others, it is often extremely difficult for them to ask for help for themselves, or even to admit to themselves that they might need help. Society expects doctors to have all the answers and be able to solve all problems. This unrealistic expectation affects not only the doctor, but spills over in to the "medical family" as well. All families experience difficulties from time to time, but the medical family often struggles to give itself permission to be less than perfect. In medical families, all to often, the perceived need to "keep up appearances," tragically overshadows an urgent need to get help.

Help-confidential, comfortable, and for a number of difficulties—is readily accessible to physicians and their families through the Physicians Family Support committee. This special Alliance committee parallels the SCMA Physicians Advocacy and Assistance Committee (PAAC) and, in many ways, the two work hand in glove. One easy, confidential phone call (1-800-327-1021, ext. 232) to Cathy Boland at SCMA Headquarters can put any SC physician or his/her spouse in touch with someone who can help. There is no need to struggle alone or suffer in silence.

Problems come in various shapes and sizes—alcoholism, drug addiction, mental illness, aging and senility, abuse, grief, long-term illness, malpractice suits, martial and family problems. One purpose of our committee is to provide help and support to families experiencing these problems. We do this in a number of ways.

One branch of the committee, directed by chairperson, Dot Haddock (Mrs. Samuel T.), offers direct contact with SCMA members and their families by sending notes of congratulations for such occasions as passing "the boards," birthdays and new arrivals, or notes of sympathy and support in cases of illness, accident or loss of a loved one. If you know of a person or family needing a message of this sort, please contact Dot at 104 Carter Oaks Drive, Anderson, SC 29621 (864-226-6280).

The other branch of the committee, headed up by Kaye Borgstedt (Mrs. M. E.) and Barbara Clark (Mrs. Terence M.), works closely with, and provides parallel services to, the SCMA PAAC in supporting the families of impaired physicians. The state is divided into regional teams so that peers provide support for the physician. The PAAC can advise and assist in matters relating to treatment, licensure, malpractice, finances, legal issues, managed care contracts and other job and practice issues. Our regional spouses' teams offer parallel support for the family. When physicians attend Caduceus (Medical AA) meetings, for example, their spouses can attend the "Caduceus Al-Anon" group.

If you, a family member, colleague, or friend, are struggling with a painful problem or have questions about impairment, please call for information. We all need help from time to time and medical families are no exception. We know that the first step, asking for help, is the toughest. We try to make it as easy as possible, while taking care to protect your confidentiality.

Dot Haddock, Chairperson
Kaye Borgstedt and Barbara Clark, PAAC Appointees

Letters to the Editor

ANY IDEAS?

Dear Sir:

I would appreciate any thoughts concerning a case of localized dermatitis.

The patient is an 80 year old retired college professor that I've attended for 30 years (figure 1). He has had a local dermatitis about an old smallpox vaccination scar for the past two years. This is irritating, not very puritic, and he thinks it is gradually worsening. Topical corticosteroids have given only minor relief.

The rather large smallpox scar was a result of vaccination at age 3, in 1921 while on his way to Peru with his missionary parents. He has had two successful smallpox takes since his initial take. These do not have the surrounding dermatitis. Consultation with a dermatologist and two internists (one of whom was his daughter), resulted in no diagnosis. My own opinion is that it may be some sort of delayed immune reaction.

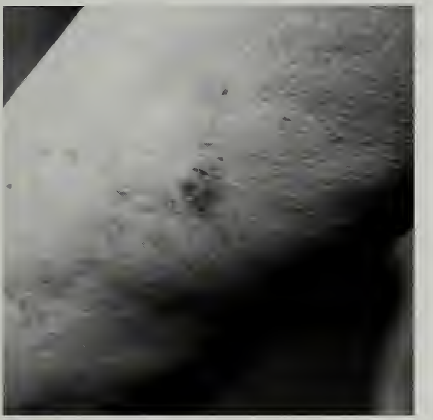

Figure 1

His medical history is of his aortic valve being replaced by the Colley-Cutter valve, done by Dr. Colley 20 years ago. He has had numerous basal cell carcinomas of his face and scalp removed.

I would appreciate any thoughts concerning this most interesting case.

William Harvey Hunter, M. D.
Clemson Medical Clinic—Hunter Court
139 Anderson Highway, Suite 150
Clemson, SC 29631

Dear Sir:

I very much enjoyed the article "The Vocational Rehabilitation of Medicine" by Alva W. Whitehead, M. D., which was in the October 1998 issue of *The Journal*. I am writing to congratulate you and Dr. Whitehead on the article.

I think the message was an excellent one and would hope that this article might be reprinted and be made available as a part of the orientation packet or certainly earlier on in the freshman material for each medical student at both of our medical schools. It is certainly a message which is important and which all young physicians-to-be should be made aware of early in his/her career.

I would like to congratulate Dr. Bryan on his excellent remarks regarding the article.

It has been my personal privilege to know Dr. Whitehead for more than twenty years and to be able to say that he has always practiced what he preaches. It was, therefore, particularly gratifying and even more enjoyable to read this article and I was personally appreciative that he has shared this with us.

P.S. I would also congratulate the editor for his appropriate response to Dr. Whitehead's article also included in the same issue.

Hunter R. Stokes, Sr., M. D.
Box F-17
Florence, SC 29501

Classifieds

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Gray Matter

"Matters of Interest to South Carolina Physicians."

Thornton & Thorne give the medical community something to think about this month.

DO YOU HAVE ENOUGH CAPITAL?

Do you have enough capital for your own retirement or for your beneficiaries in the event of your death? The following table shows the number of years that $1,000,000 will last, depending upon the interest rate earned and the monthly income withdrawn.

AFTER-TAX INCOME (35% BRACKET)

MONTHLY INCOME	6%	8%	10%
$5,000	27.0	38.0	Forever
$6,000	20.0	24.8	36.0
$7,000	16.0	18.7	23.0
$8,000	13.4	15.1	17.5
$9,000	11.6	12.7	14.3
$10,000	10.2	11.0	12.1

Example: If you begin with $1,000,000 and continuously earn 8% interest, you can withdraw $6,000 per month for 24.8 years. The fund will then be depleted.

This chart shows how long it will take to accumulate a fund of $1,000,000:

	INTEREST RATE		
MONTHLY SAVINGS	6%	8%	10%
$1,000	29.5	24.5	22.2
$1,500	24.5	20.8	18.9
$2,000	20.8	17.9	16.5
$2,500	18.7	15.8	14.5
$3,000	15.8	14.5	12.8

Example: If you earn 8% per year and can save $2,000 per month, it will take 17.9 years to accumulate $1,000,000.

To accumulate a fund for your own retirement requires time. If you die early, you run out of time. Life insurance creates instant capital for your family. If your accumulated capital is not sufficient if you die today, consider life insurance to proctect your family. Premiums to instantly create a $1,000,000 benefit for your survivors have dramatically decreased over the last several years.

Views expressed herein are those of the authors only and in no way represent the SCMA. We do not give tax advice. Only your attorney and accountant are qualified to do so.

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